

Improving on the Contingent Fee

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IMPROVING ON THE CONTINGENT FEE

Kevin M. Clermont† and John D. Currihan††

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INTRODUCTION

Two basic fees—contingent and hourly—dominate the variety of fees that lawyers charge clients for pursuing damage claims. Each of these two types has its advantages; each is plagued with substantial disadvantages. This Article proposes a new type of fee, one that preserves the respective advantages of the two present fees while minimizing their distinct disadvantages. In essence, the proposed fee calls for the payment, on a contingent basis, of an amount computed by adding one component tied to hours worked and another component linked to amount recovered. The preferability and feasibility of this proposed fee argue for the abolishment, or at least for the severe restriction, of the contingent fee as it is now known; the hourly fee should continue as a client's option.

In detailing and evaluating the proposal, this Article

- * (1) examines the two present fee systems;
- * (2) focuses on a serious problem common to both of these present fee systems—economic conflict of interest between lawyer and client;
 - * (a) illustrates this conflict of interest problem through the use of an economic model, describes the proposed fee in detail, and then shows that in the model the proposed fee aligns the economic interests of lawyer and client;

- (b) relaxes the idealized assumptions underlying the economic model in order to analyze how much the conclusions regarding alignment of interests depend on those assumptions;
- * (3) reexamines the two present fee systems with an eye for problems other than economic conflict of interest;
- (4) evaluates the proposed fee;
 - * (a) demonstrates the preferability of the proposed fee in view of those problems other than economic conflict of interest;
 - * (b) shows the feasibility of implementing the proposed fee;
 - (c) explores the side effects such implementation might cause throughout the legal system; and
- (5) compares the proposed fee with fee reforms suggested by others.

The topics starred above mark an expedited route through this Article. The unstarred topics, although essential for both theoretical development and proof, are the more technical discussions.

I

PRESENT FEE SYSTEMS

This Article concerns the realm of legal practice where the contingent fee is currently in use.¹ To provide a context for discussion, however, we shall speak in terms of the one-time representation by a lawyer of a plaintiff in a potential personal-injury litigation.

The lawyer and the client in such a situation usually agree on a contingent fee.² Under this fee the lawyer receives a percentage, say 33⅓%, of the settlement or judgment; if there is no recovery,

¹ See generally F. MACKINNON, CONTINGENT FEES FOR LEGAL SERVICES 25-28, 45-53 (1964).

² The contingent fee is almost the exclusive method of financing personal-injury litigation. See M. BLOOM, THE TROUBLE WITH LAWYERS 140-41 (1968); F. MACKINNON, *supra* note 1, at 116, 209; D. ROSENTHAL, LAWYER AND CLIENT: WHO'S IN CHARGE? 96-97 (1974); Franklin, Chanin, & Mark, *Accidents, Money, and the Law: A Study of the Economics of Personal Injury Litigation*, 61 COLUM. L. REV. 1, 22 & n.103, 33 (1961) [hereinafter cited as *Columbia Study*]. Cf. U.S. DEP'T OF HEALTH, EDUCATION, & WELFARE, REPORT OF THE SECRETARY'S COMMISSION ON MEDICAL MALPRACTICE 32 (1973) (contingent fee almost exclusive method in medical malpractice cases) [hereinafter cited as HEW REPORT]; Dietz, Baird, & Berul, *The Medical Malpractice Legal System*, in HEW REPORT: APPENDIX 113-14 (1973) (same).

his client pays nothing.³ The current alternative at least theoretically available is the hourly fee.⁴ Here the lawyer receives an

³ The contingent fee receives grudging approval in ABA CODE OF PROFESSIONAL RESPONSIBILITY EC 2-20, 2-24, 5-7, & DR 2-106, 5-103, but must meet the restrictions of these and other provisions of the Code. For example, the fee must be reasonable in amount. *See id.* EC 2-17, 2-18, & DR 2-106(A) & (B). This general restriction may be enforced by self-restraint, contract, custom, bar associations, courts, and, to a lesser extent, legislatures and agencies. Also, this restriction sometimes spawns related rules, most of which simply require that the fee not be "excessive," "exorbitant," or "unconscionable." But in some places and for certain situations rules provide specific restrictions, such as maximum percentage fees. *See generally* V. COUNTRYMAN, T. FINMAN, & T. SCHNEVER, *THE LAWYER IN MODERN SOCIETY* 198-99 (2d ed. 1976); F. MACKINNON, *supra* note 1, at 20-24, 65-66; NEW YORK STATE, REPORT OF THE SPECIAL ADVISORY PANEL ON MEDICAL MALPRACTICE 194-97 (1976) [hereinafter cited as MCGILL REPORT]; L. PATTERSON & E. CHEATHAM, *THE PROFESSION OF LAW* 269-72 (1971); Special Subcomm. of Defense Research Comm., International Ass'n of Insurance Counsel, *A Study of Contingent Fees in the Prosecution of Personal Injury Claims*, 33 INS. COUNSEL J. 197, 201-02, 209-13 (1966); *Special Project—Recent Developments in Attorneys' Fees*, 29 VAND. L. REV. 685, 710-14 (1976) [hereinafter cited as *Special Project*]. Accordingly, the contingent fee in personal-injury suits is most commonly 33⅓% of the recovery, or slightly higher. *See* F. MACKINNON, *supra* note 1, at 65-66, 116-19; Note, *Contingent Fee Contracts: Validity, Controls, and Enforceability*, 47 IOWA L. REV. 942, 947 & n.27 (1962); note 182 *infra*. Cf. HEW REPORT, *supra* note 2, at 32 (medical malpractice); Dietz, Baird, & Berul, *supra* note 2, at 114 (same).

The expenses of litigation, other than the lawyer's overhead and services, present a separate problem. In the event of victory, the attorney might deduct these expenses from the recovery *before* or *after* he computes his percentage share. This difference in computation affects how lawyer and client split the fruits of victory. The latter computation technique raises the attorney's effective percentage rate relative to the former. *See* F. MACKINNON, *supra* note 1, at 66-67. In the event of defeat, the client theoretically must refund all of these litigation expenses advanced by the lawyer. *See* ABA CODE OF PROFESSIONAL RESPONSIBILITY DR 5-103(B). This obligation removes the "purity" from the contingency aspect of the fee, which may or may not make good policy sense. On the one hand, this departure from purity helps to close courthouse doors to the poor and risk-averse, thus partially defeating one purpose of contingency. On the other hand, such token client liability may have symbolic value, since bringing suit no longer appears "painless" to the client, and in fact may serve to screen out some marginal cases. But such additional screening pressure may not be worth its price in view of the lawyer's screening incentive and the client's other psychological and financial disincentives to bringing suit. *See* text accompanying notes 92 & 116-24 *infra*. Cf. F. MACKINNON, *supra* note 1, at 68-70 (discussing possibility of incentive for client to bring suit if lawyer assumes expenses). Actual practice, however, renders these arguments largely academic—the client usually does not pay back these expenses. *See id.* at 69. Win or lose, then, the contingent fee in practice amounts simply to a percentage of any recovery obtained. In any event, for ease of expression, we shall proceed for the time being on the assumption that no such litigation expenses exist. We shall eventually relax this assumption in notes 63-73 and accompanying text *infra*.

In summary, we can adequately describe the contingent fee as 33⅓% of any recovery.

⁴ *See* ABA CODE OF PROFESSIONAL RESPONSIBILITY EC 2-20, 5-7; Comment, *Are Contingent Fees Ethical Where Client Is Able to Pay a Retainer*, 20 OHIO ST. L.J. 329 (1959). Cf. note 2 *supra*.

Payment for legal services may take other forms, such as a contingent or certain lump sum for handling the case. *See* F. MACKINNON, *supra* note 1, at 18-20; M. MAYER, *THE LAWYERS* 20-21 (1967); ABA COMM. ON ETHICS & PROFESSIONAL RESPONSIBILITY, INFORMAL

amount proportional to the number of hours worked, say \$50 per hour; his fee accrues whether his client wins or loses.⁵ These two basic fees come in many variations,⁶ and often the actual fee charged is effectively a combination of the two.⁷ Nevertheless, for purposes of analysis it is useful to simplify, separate, and then examine these two basic fee systems.⁸

Examination reveals that the two fees are polar opposites on two separate axes: (1) conditionality—payment contingent on recovery versus certain payment, and (2) computation—a percentage of recovery versus an hourly rate.⁹ Therefore, a more accurate terminology for these two polar fee systems would be “contingent percentage fee” and “certain hourly fee.”

Each of the two fees has its own significant and distinctive disadvantages. We shall explore them in Parts II and III.

OPINIONS, No. 1389 (1977). However, such other forms of payment rarely occur in the personal-injury context. Most have obvious inadequacies and offer no avenue for the fruitful pursuit of reform. We discuss those that do have potential for reform in the text accompanying notes 218-34 *infra*.

⁵ The hourly fee is likewise subject to the general restriction of reasonableness described in note 3 *supra*. Generalization with regard to hourly charges is difficult, but our illustrative \$50 figure is realistic. See Grady, *Some Ethical Questions About Percentage Fees*, LITIGATION, Summer 1976, at 20, 21, 23; *Median Earnings of Lawyers Show Slight Increase*, 62 A.B.A.J. 768 (1976). Cf. HEW REPORT, *supra* note 2, at 33 (medical malpractice); Dietz, Baird, & Berul, *supra* note 2, at 114-16 (same).

⁶ Many complex variations in the rate level for the contingent fee exist in practice. For example, the percentage may decrease with the size of recovery or increase as the stage of litigation progresses. See F. MACKINNON, *supra* note 1, at 65-66; Note, *supra* note 3, at 947-48. Similarly, the hourly fee may involve adjustments reflecting factors other than time in an attempt to measure more accurately the value of the legal services. Cf. ABA CODE OF PROFESSIONAL RESPONSIBILITY DR 2-106(B) (listing “[f]actors to be considered . . . in determining the reasonableness of a fee”). We discuss the principal variations that have potential for reform in the text accompanying notes 218-34 *infra*.

⁷ For example, a lawyer on a contingent fee might not charge the full percentage agreed upon if the case unexpectedly required little work or yielded a surprisingly large recovery. See F. MACKINNON, *supra* note 1, at 188, 194 n.77; *Columbia Study*, *supra* note 2, at 24-26, 33. Similarly, a lawyer might reduce his hourly charge if his representation has proved unsuccessful. See ABA CODE OF PROFESSIONAL RESPONSIBILITY DR 2-106(B)(4); M. MAYER, *supra* note 4, at 24-25.

⁸ This does not require blinding oneself to the possibility of ultimately combining the attributes of the two basic systems. Indeed, this Article proposes such a combination.

⁹ The conditionality and computation variables give rise to four possible combinations: (1) contingent percentage, (2) contingent hourly, (3) certain percentage, and (4) certain hourly. The first and the fourth are the two polar systems discussed in the text. Number (3) is self-contradictory in the personal-injury context, unless the percentage is based on the amount sought rather than recovered; and, in any form, it has nothing to recommend it. Number (2), however, does present a real possibility, which we discuss in the text accompanying note 225 *infra*.

II

THE PROBLEM OF ECONOMIC CONFLICT OF INTEREST

Numerous conflicts of interest exist between lawyer and client, many of them economic in nature. Consider two situations where, if we view the lawyer as choosing among alternative economic paths, there may be no guarantee that he will choose the path that is best for his client. First, the lawyer may not have a direct economic incentive to work for his client's victory because the lawyer's profit may be unrelated to the case's outcome. Second, the lawyer may not have a direct economic incentive to work the number of hours necessary to maximize the size of his client's net recovery, if any, because to maximize his own profit the lawyer may have to work a different number of hours.¹⁰ Our initial discussion here in Part II concerns only these two particular kinds of lawyer-client conflict, which we shall synecdochically call "economic conflict of interest." To begin, we offer two fundamental propositions.

First, we propose that the lawyer and the client are rational, economic beings who tend to act in accordance with their own direct economic best interests. Morality, professional ethics, or even self-interested concern for indirect benefits such as a good reputation might, of course, cause the lawyer or the client to act in a contrary way. Or, one party to the lawyer-client relationship might have sufficient power to force the other to act contrary to the latter's direct economic best interests. For example, an occasional, sophisticated client might be able to control the lawyer so that he serves the client's interests more perfectly.¹¹ Nevertheless, we focus on direct economic interests because our aim is to see how the unrestrained economic animal will act, and then to change the economic environment so that the same animal would be inclined to act in a socially more desirable manner. With such change, society could lessen its reliance on those noneconomic or indirect restraints currently used to bring about socially desirable behavior.

Second, we submit that economic conflict of interest between lawyer and client is undesirable. This proposition flows from the premise of the adversary system and from the concept of advocacy.

¹⁰ See F. MACKINNON, *supra* note 1, at 196-200; D. ROSENTHAL, *supra* note 2, at 96-99. See generally Mitchell & Schwartz, *Theoretical Implications of Contingent Legal Fees*, 12 Q. REV. ECON. & BUS. 69 (1972); Schwartz & Mitchell, *An Economic Analysis of the Contingent Fee in Personal-Injury Litigation*, 22 STAN. L. REV. 1125 (1970).

¹¹ See F. MACKINNON, *supra* note 1, at 196; D. ROSENTHAL, *supra* note 2, at 115-16.

Client battles client, as each tries to maximize his own economic return. A client hires a lawyer to serve as his champion. There are, however, certain limits on the lawyer's devotion to his client's cause. Ethical rules of the game proscribe the lawyer's excesses of zeal, and the court and opposing counsel stand ready to control and to offset such excesses. A lawyer-client conflict of interest could conceivably help to temper the lawyer's zeal: A lawyer who looks after his own interests will not push vigorously his client's conflicting interests. But economic conflict of interest between lawyer and client has no proper role in tempering zeal. The lawyer's direct economic self-interest is too potent an influence to set against the client's interests. The lawyer should generally be a faithful representative, striving within the bounds of the law to maximize his client's economic return; the lawyer's direct economic self-interest should never distract him from that task.¹²

Therefore, we conclude that an important goal in structuring legal fees should be the elimination, or at least the minimization, of economic conflict of interest between lawyer and client. We shall now examine the two polar fee systems to discover how they measure up in this regard. Conclusions will be stated preliminarily, and then an economic model will be introduced to demonstrate their validity.

Assume that the client has a claim that conceivably has a positive net value. Under the certain hourly fee, because the lawyer's fee is proportional to the number of hours devoted to the case, too much work by the lawyer could reduce the client's net recovery to zero or less. On the other hand, too little work could result in little or no recovery, likewise reducing the client's net recovery to zero or less. There is a particular number of hours of work between these two extremes that would result in the largest net recovery for the client. However, the lawyer has no direct economic incentive to work that particular number of hours. No matter how many hours the lawyer devotes to the case before he ceases work and shifts his efforts to other cases, his economic position will be unaffected,

¹² Perhaps we belabor this second proposition, but we pause on it because, contrary to first impression, it is not a preordained precept. Nevertheless, the authorities cited in note 10 *supra* all assume that economic conflict is undesirable. ABA CODE OF PROFESSIONAL RESPONSIBILITY EC 5-1 treats this as a given:

The professional judgment of a lawyer should be exercised, within the bounds of the law, solely for the benefit of his client and free of compromising influences and loyalties. . . . [H]is personal interests . . . should [not] be permitted to dilute his loyalty to his client.

because he is being paid at his normal hourly rate and his fee is unconditional. If his workload happens to be light, the lawyer would tend to work more than the particular number of hours required to maximize his client's net recovery—a strategy obviously to his client's disadvantage. The overworked attorney would tend to work fewer than that particular number of hours, also to the client's detriment. In short, the lawyer's economic interests do not align with those of his client. At best, the certain hourly fee leaves the lawyer indifferent to the client's economic interests. Absent a direct economic incentive to make the lawyer work in the client's best interests, our legal system must rely exclusively on noneconomic or indirect restraints to forestall the potential economic conflict of interest between lawyer and client.

In contrast, a frequently cited advantage of the contingent percentage fee is that the lawyer and the client become partners: Since the attorney gets a percentage of the recovery but nothing else, the client can rely on him for zealous and faithful service. A recent study gave this aspect of the contingent percentage fee only this cursory treatment: "It gives the lawyer an incentive to get the best possible award or settlement for his client."¹³ This is simply a misconception. The lawyer's and the client's economic interests align only partially. Although lawyer and client share a common interest in victory, misalignment exists with respect to the number of hours the lawyer should work. Because the client's net recovery varies directly with the gross recovery, and because the client must pay a fixed percentage fee without regard to the number of hours worked, the client's economic interests are best served when the lawyer devotes a very large number of hours to ensure the maximum settlement or judgment. However, as shown below, the lawyer optimizes his own economic position by working a much smaller number of hours; direct economic incentive prods him to obtain a respectable settlement with relatively slight effort, thus securing for himself the maximum profit. Here again our legal system must rely on restraints other than direct economic incentive to make the lawyer act in the client's best interests.

In sum, neither the certain hourly fee nor the contingent percentage fee can align fully the economic interests of lawyer and client. Alignment with respect to interest in the outcome of the case results from resolving the conditionality variable in favor of contingency. However, alignment with respect to interest in hours

¹³ MCGILL REPORT, *supra* note 3, at 194. See *id.* at 42.

worked depends on the other variable: the basis for computing the fee. Unfortunately, neither the hourly approach nor the percentage approach solves this side of the alignment problem. The former tends to make the lawyer indifferent as to hours worked, while the latter provides an incentive for him to underwork.

To study this problem further, we introduce an economic model of the real world. We shall use the model first to illustrate and prove our foregoing conclusions, and then to devise a new fee that solves the alignment problem completely. Making that new fee a contingent fee would provide alignment of interests in outcome.¹⁴ Hybridizing the hourly and percentage approaches would align interests in hours worked. The dollar amount of the proposed contingent fee would be computed by adding (1) the lawyer's time charge for the hours worked to (2) a percentage (say 5% or 10%¹⁵) of the amount by which the gross recovery exceeds that time charge. We call this proposed fee, fully described below,¹⁶ the "contingent hourly-percentage fee."

A. *Modeling the Economic Conflict of Interest Problem*

1. *The Model*

To analyze the alignment problem in a quantitative fashion, we must initially make certain assumptions. The model that emerges will enable us to apply the tools of mathematical and economic analysis. We have derived our primary model from that of Professors Murray L. Schwartz and Daniel J.B. Mitchell.¹⁷ The following assumptions underlie our model:

- (1) the plaintiff and his lawyer are profit maximizers;¹⁸
- (2) the plaintiff and his lawyer are indifferent to delay;
- (3) the plaintiff's lawyer knows in advance (a) that the defendant in the particular case will exhibit a continual willingness to settle in an amount independent of the lawyer-plaintiff fee structure, (b) what the defendant will offer in settlement after any number of hours that the plaintiff's lawyer has devoted to the case,

¹⁴ But cf. note 57 *infra*.

¹⁵ See notes 178-79 and accompanying text *infra*.

¹⁶ See notes 37-40 and accompanying text *infra*; text accompanying notes 171-74 *infra*.

¹⁷ See Schwartz & Mitchell, *supra* note 10, at 1127-28, 1156. Indeed, we gratefully acknowledge heavy analytical reliance on that piece throughout this Section A, as well as inspirational reliance throughout this Article.

¹⁸ See text accompanying note 11 *supra*. Profit means income minus opportunity cost. See Schwartz & Mitchell, *supra* note 10, at 1134 n.13.

and (c) that the defendant's highest settlement offer will be acceptable to the plaintiff and his lawyer;¹⁹

(4) the size of the defendant's settlement offer depends on the number of hours that the plaintiff's lawyer has devoted to the case—specifically, the plaintiff's lawyer must work some minimum amount of time before the defendant will make any positive settlement offer, but thereafter each additional hour of lawyer's time²⁰ will increase the settlement offer by a successively smaller increment²¹ until some maximum settlement level is reached;

(5) the plaintiff's lawyer has no idle time and each hour he devotes to the plaintiff's case he would otherwise have devoted to matters handled at his certain hourly wage—i.e., time that the lawyer allocates to the plaintiff's case causes him to forgo earning his certain hourly wage; and

(6) there are no costs for the plaintiff in pressing his claim or for his lawyer in working on that or any other matter, except the cost of the lawyer's time.

Assumptions (3) and (4) generally deal with the benefits to be reaped from the case, assumptions (5) and (6) deal with the associated costs, and assumptions (1) and (2) deal with the way the plaintiff and his lawyer will act when faced with those benefits and costs. Some of the assumptions are more realistic than others. As-

¹⁹ What a party is willing to offer or to accept in settlement at any given time is governed by a complex set of factors. These prominently include that party's current estimates of (1) the plaintiff's probability of obtaining judgment, (2) the expected size of the plaintiff's judgment, if any, and (3) the expected costs both sides will incur in litigating to judgment. See note 84 *infra*. Both sides' attitudes toward risk and litigation also play a role.

These estimates and attitudes are highly subjective. The parties' views thereon may be so different as to preclude settlement. See generally Posner, *An Economic Approach to Legal Procedure and Judicial Administration*, 2 J. LEGAL STUD. 399, 417-20 (1973). We assume here, however, that the defendant's highest settlement offer will be acceptable to the plaintiff and his lawyer. This assumption implies that every case will eventually be settled. We shall later relax this implied assumption of a 100% settlement rate. See text accompanying notes 74-89 *infra*. Cf. text accompanying notes 197-206 *infra*.

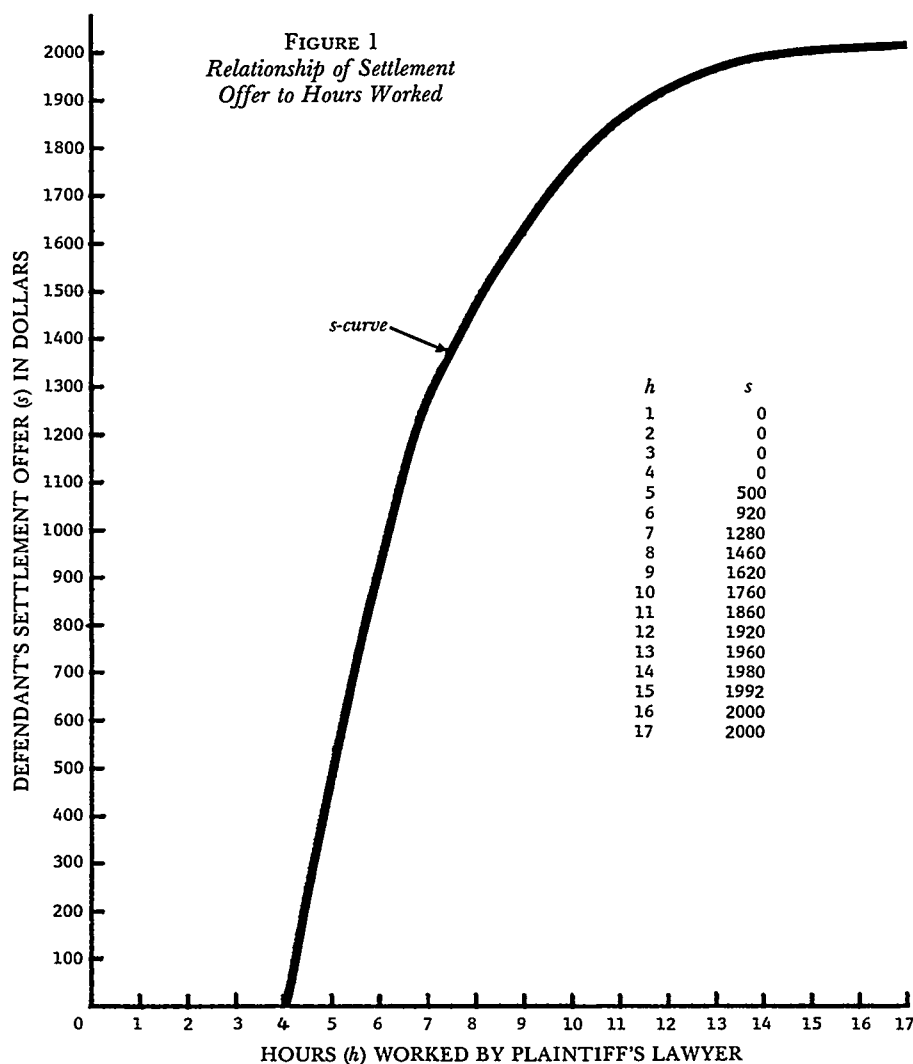
²⁰ The plaintiff's lawyer might spend each additional hour in a variety of activities: investigation, research, negotiation, drafting, court appearance, and so on. The lawyer, however, would tend to allocate his efforts among these various tasks so that the additional hour brings the maximum possible increment in settlement value. This strategy yields the smooth curve depicted in Figure 1. Cf. Schwartz & Mitchell, *supra* note 10, at 1128 n.3 (relationship between gross recovery and hours need not be smooth); text accompanying notes 56 & 101 *infra*.

²¹ See text accompanying note 22 *infra*. In mathematical terms, if s stands for the size of the defendant's settlement offer and h for the number of hours the plaintiff's lawyer works, $ds/dh > 0$ and $d^2s/dh^2 < 0$. We obviously also assume that the curve relating s to h is continuous and that such first and second derivatives exist for all positive values of s . In economic terms, diminishing returns prevail.

sumptions (1) and (4) do not represent unreasonable departures from reality. The four other assumptions, however, are clearly unrealistic in some cases. Accordingly, we shall relax these four assumptions in Section B of Part II.

2. *An Illustrative Case*

We have assumed that the size of any given settlement offer in a case is related to the number of hours devoted to the case by the plaintiff's lawyer. The curve in Figure 1 depicts this hour-settle-



ment relationship for an illustrative case.²² The horizontal axis of the graph measures the number of hours (h) worked; the vertical axis measures the size of the defendant's settlement offer (s) in dollars. For each number of hours, the height of the curve (s -curve) represents the amount of the settlement then obtainable. For example, if the lawyer works 10 hours, the defendant will offer \$1760 to settle. Once the lawyer works 16 hours, the s -curve reaches its maximum value of \$2000; further effort by the plaintiff's lawyer will not increase the size of the settlement.

Using the model and this illustrative case, we can now analyze the economic interests of the plaintiff and his lawyer under various fee systems by asking two questions: (1) at what number of hours would the lawyer be inclined to settle the case, and (2) at what number of hours would his client wish it to be settled?

3. *Performance of the Certain Hourly Fee*

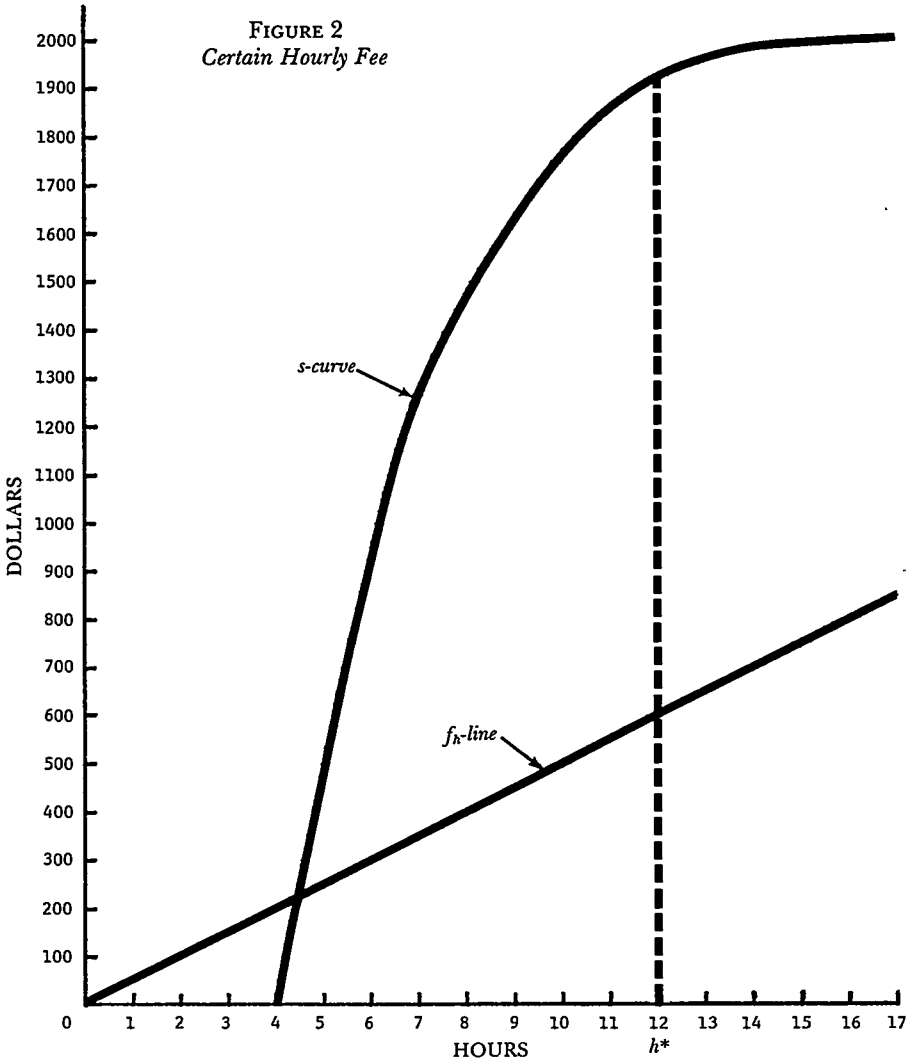
Since a fee on a certain hourly basis is proportional to the number of hours worked, the relationship between fee (f) and number of hours naturally results in a straight line. Figure 2 shows this certain hourly fee line (f_h -line). For each value of h , the height of the f_h -line represents the fee then earned, which is equal to the hourly wage (w) times h . We continue with an illustrative wage of \$50 per hour.²³ The client's net recovery, under our assumptions, is the difference between the settlement and the fee. For example, if the lawyer works 10 hours, the settlement will be \$1760, the lawyer's fee will be \$500, and the client will recover the difference, or \$1260.

As a profit maximizer indifferent to delay, the client would like to receive the highest possible net recovery. If he were as knowledgeable as his lawyer and could control the number of hours worked by the lawyer, the client would choose the number of hours required to maximize the difference between the settlement and the fee. Graphically, the client would choose that h for which the s -curve is farthest above the f_h -line; that particular number of hours (h^*) occurs at the point where the tangent to the s -curve

²² For ease of comparison, we have taken the depicted values from Schwartz & Mitchell, *supra* note 10, at 1128-33. Those numbers are realistic. See Grady, *supra* note 5, at 20-21. For a similar numerical illustration, see D. ROSENTHAL, *supra* note 2, at 97-98.

²³ See note 5 *supra*. Our conclusions concerning the performance of the certain hourly fee hold true for any positive hourly wage.

becomes parallel to the f_h -line.²⁴ Turning to the illustrative case in Figure 2, we see that the point where the client's interests are best served, h^* , occurs at 12 hours.²⁵ At that point, the settlement is \$1920, the fee is \$600, and the client's net recovery is \$1320. No other h would yield the client a larger net recovery. For any h less



²⁴ In mathematical terms, $ds/dh = df/dh$ at h^* . In economic terms, the marginal settlement equals the marginal fee at h^* . For a proof of this, see Appendix A.

²⁵ In the textual illustrations, we treat h as having only integer values.

than h^* —that is, to the left of h^* in Figure 2—the s -curve rises more rapidly than the f_h -line; there the increase per hour in s more than covers the \$50 per hour by which f increases. For any h greater than h^* , the f_h -line climbs more rapidly than the s -curve; there the hourly increase in the fee consumes more than the corresponding increase in the settlement. Thus, to serve the client's best interests, the lawyer should work h^* hours, no more and no less.

We can reach this result more intuitively. If the client were himself the lawyer and had other legal work yielding \$50 per hour, he would view his own case as a resource and his time as a cost. He would seek profit by investing time in developing the case. He would continue to spend time on the case as long as each additional hour increased the settlement value of the case by \$50 or more, and would stop work when an additional hour would cause the settlement value to increase by less than \$50. For example, after 11 hours of work, the settlement value is \$1860, the time cost is \$550, and the client-lawyer's net recovery is \$1310. If he works one more hour, the settlement will increase by \$60 to \$1920. Since the additional hour will cost him only \$50, the client acting as his own lawyer should work that twelfth hour, thus obtaining a net recovery of \$1320. A decision to spend more time, however, would not be wise: 13 hours of work would earn for the client-lawyer a settlement of \$1960 at a time cost of \$650, leaving a net recovery of \$1310. The extra hour would cost him \$50, but the settlement would increase by only \$40. Instead of spending that thirteenth hour on his own case and receiving only \$40 for it, the client-lawyer would do better by working on some other matter that would pay him \$50 for that hour. When the client hires someone else to act as his lawyer, his reasoning remains the same—there is no difference here between spending \$50 worth of his own time and paying \$50 in cash for the same amount of someone else's time. Therefore, the client would want his lawyer to devote 12 hours— h^* hours—to the case.²⁶

The lawyer, on the other hand, has economic interests quite different from those of his client. The lawyer receives \$50 for each hour he devotes to the case. Under the assumptions of the model, however, for each such hour he must forgo working an hour on some other matter, which would also have rewarded him \$50. So

²⁶ This intuitive picture suggests that h^* is the optimal amount of work—the number of hours that would be invested in the case if the lawyer and the client were the same person, thus ensuring the absence of conflict of interest.

the opportunity forgone equals the benefit derived from an additional hour on this case. If we plot forgone income against h , we find that the resulting opportunity cost line (*o-line*) is identical to the f_h -line in Figure 2; the opportunity cost is \$50 per hour. In an economic sense, this means that the lawyer can neither profit nor lose by devoting time to this case rather than to another matter. Thus, as a profit maximizer indifferent to delay, the lawyer is indifferent as to h .

In sum, the lawyer has no direct economic incentive to work h^* hours, the number of hours that his client's best interests dictate.

4. *Performance of the Contingent Percentage Fee*

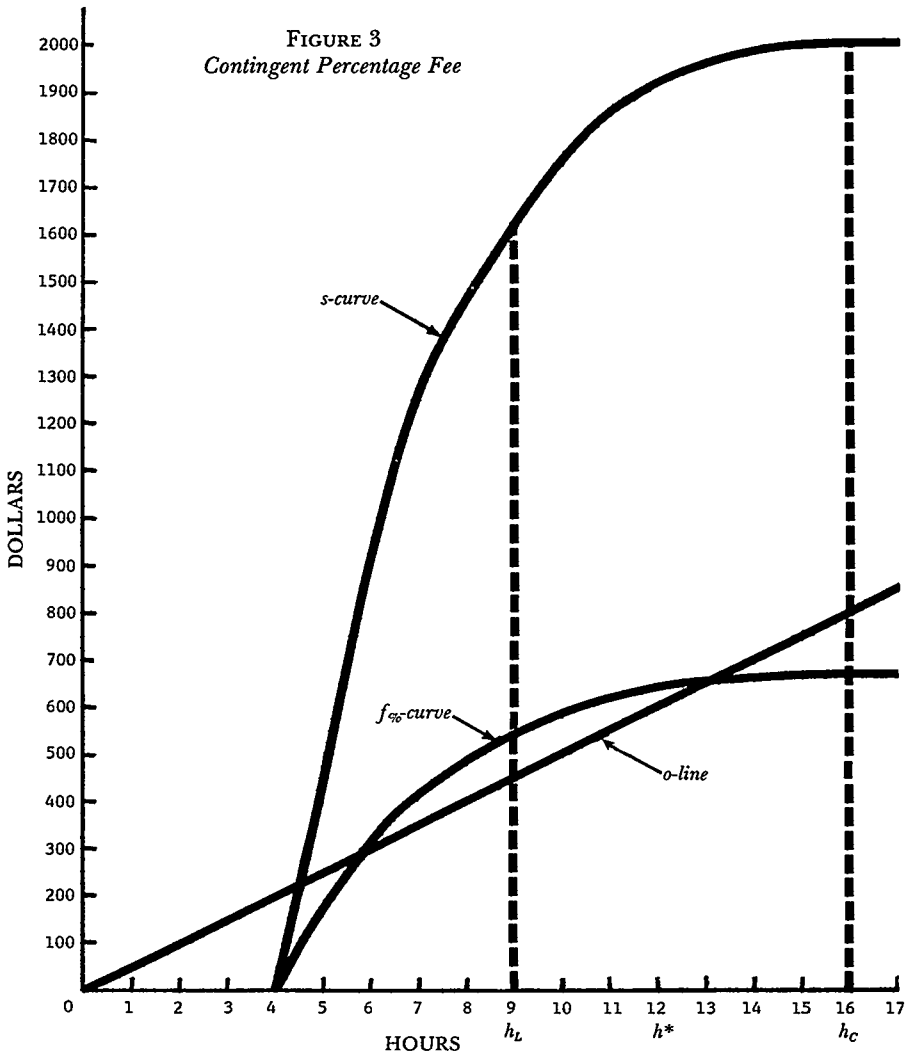
A fee on a contingent percentage basis is proportional to the size of the settlement. Figure 3 shows, in addition to the *s-curve* and the *o-line*, the relationship between the contingent percentage fee and the number of hours worked. Naturally, this relationship is a curve tied to the *s-curve*. For each h , the height of the contingent percentage fee curve ($f_{\%}$ -curve) represents the fee earned—equal to the percentage rate (r) times s —if settlement were then consummated. We continue with an illustrative rate of $33\frac{1}{3}\%$.²⁷ The client's net recovery still equals the settlement minus the fee. For example, if the lawyer works 10 hours, the settlement will be \$1760 and the lawyer's fee will be \$587, leaving the client with a net recovery of \$1173.

The client's goal remains the same: He would like to choose the number of lawyer's hours required to maximize his net recovery—the difference between the settlement and the fee—or, equivalently, to maximize the vertical distance between the *s-curve* and the $f_{\%}$ -curve. To accomplish this, the client would choose that particular number of hours (h_c) where the tangents to the *s-curve* and the $f_{\%}$ -curve become parallel.²⁸ This condition occurs where the *s-curve* reaches its maximum.²⁹ Turning to the illustrative case in Figure 3, we see that the number of hours at and above which the client's interests are best served, h_c , is 16. At that point, and for any greater value of h , the settlement is \$2000, the fee is \$667, and the client's net recovery is \$1333. No lesser value of h would give the

²⁷ See note 3 *supra*. Our conclusions concerning the performance of the contingent percentage fee hold true for any value of r greater than 0% and less than 100%.

²⁸ In mathematical terms, $ds/dh = df/dh$ at h_c . In economic terms, the marginal settlement equals the marginal fee at h_c . For a proof of this, see Appendix B.

²⁹ For a proof, see Appendix B.



client a larger net recovery. This result is hardly surprising. Since the client keeps $\frac{2}{3}$ of any settlement, the amount he keeps will reach a maximum when the settlement itself is maximized. Thus, in the client's best interests, the lawyer should work at least h_C hours.

The lawyer once again has economic interests very different from his client's. For each hour the lawyer devotes to the case, he receives $\frac{1}{3}$ of any increase in the settlement resulting from that hour's work. However, for that hour he must forgo working an

hour on some other matter, at an opportunity cost of \$50. His interests suggest that he should continue to devote hours to this case only as long as each additional hour increases his fee by at least as much as his opportunity cost. When the hourly increase in his fee drops below his opportunity cost, he would do better to settle and then to shift his efforts to other matters. This means that the lawyer is inclined to work the number of hours required to maximize his profit—the difference between his fee and his opportunity cost—or, equivalently, to maximize the vertical distance between the $f_{\%}$ -curve and the o -line.³⁰ That particular number of hours (h_L) occurs at the point where the tangent to the $f_{\%}$ -curve becomes parallel to the o -line.³¹ In Figure 3, the point where the lawyer's interests are best served, h_L , occurs at 9 hours. At that point, the settlement is \$1620, the fee is \$540, the opportunity cost to the lawyer is \$450, and the lawyer's profit is \$90. No other h would give the lawyer a larger profit. For all values of h less than h_L , the $f_{\%}$ -curve rises more rapidly than the o -line; there the hourly increase in the fee more than covers the \$50 per hour opportunity cost.³² For all values of h greater than h_L , the o -line climbs more rapidly than the $f_{\%}$ -curve; there an hour's opportunity cost exceeds the

³⁰ In Figure 3, the $f_{\%}$ -curve lies above the o -line for some values of h . We ignore the possibility of the $f_{\%}$ -curve lying below the o -line for all values of h , because the lawyer would then simply refuse to take the case under a contingent percentage fee. In the economic conflict of interest context, this situation is of no concern. *But cf.* text accompanying notes 189-96 *infra*.

There is a third possible configuration. The $f_{\%}$ -curve might lie below the o -line for all values of h except for one particular h , where the $f_{\%}$ -curve and the o -line just touch. This situation would prevail in a world of perfect competition among lawyers—i.e., in a no-profit world. *See* Schwartz & Mitchell, *supra* note 10, at 1136-39. Adoption of this third configuration would not alter the conclusion that the economic interests of lawyer and client conflict under the contingent percentage fee; indeed, it would strengthen that conclusion. *See id.* at 1139. Yet we reject this third configuration for the purposes of this Article, because perfect competition is not a realistic assumption here. Competition has apparently not succeeded in driving lawyers' average hourly earnings in contingent percentage cases down to their wages in certain hourly cases. *See* note 177 *infra*. Furthermore, competition has not caused percentage rates to vary with case value; standard percentage rates usually apply regardless of how clear the liability or how great the damages. *See* note 182 *infra*. *Cf.* Schwartz & Mitchell, *supra* note 10, at 1139-40 (under perfect competition, lawyer will lower percentage rate to attract client with case of high value). Accordingly, this third configuration is highly atypical; Figure 3 depicts reality better and more generally.

³¹ In mathematical terms, $df/dh = w$ at h_L . In economic terms, the marginal fee equals the opportunity cost at h_L . For a proof of this, see Appendix B.

³² For example, at $h = 8$ hours, the settlement is \$1460, the fee is \$486.67, the opportunity cost to the lawyer is \$400, and the lawyer's profit is \$86.67. If the lawyer works one more hour, the fee will increase by \$53.33 to \$540. Since the additional hour would cost the lawyer only \$50, it would serve his best interests to work that ninth hour.

corresponding increase in the fee.³³ Thus, to serve his own best interests, the lawyer should work h_L hours, no more and no less.

To illustrate the lawyer's interests in a more intuitive fashion, imagine the following situation. The client approaches lawyer A with his case, and lawyer A agrees to take it on a contingent percentage basis. Rather than do the work himself, however, lawyer A subcontracts the job to lawyer B with the client's consent. The two lawyers agree that lawyer A will pay lawyer B a certain hourly fee of \$50 per hour, but that lawyer B will work just the number of hours lawyer A directs. To serve his own best interests, lawyer A should direct lawyer B to work 9 hours because the ninth is the last hour for which he will realize at least the \$50 he must pay lawyer B . The ninth hour of work will cause lawyer A 's fee to increase by \$53.33,³⁴ but the tenth hour would cause his fee to increase by only \$46.67.³⁵ Since lawyer A must pay lawyer B \$50 for every hour the latter works, lawyer A would have to pay the missing \$3.33 for the tenth hour out of the profit reaped from lawyer B 's earlier hours. Lawyer A could avoid this and achieve a maximum profit by directing lawyer B to stop work at 9 hours. At that point the client will pay lawyer A \$540. Lawyer A will then pay lawyer B \$450, thus reaping a profit of \$90. Had lawyer A instructed lawyer B to work 10 hours, he would have reaped a profit of only \$86.67. When lawyer A does the work himself, his reasoning remains the same. Therefore, he would be inclined to work 9 hours— h_L hours—on the case.

In sum, the client wishes the lawyer to work h_C hours, a number greater than h^* , but the lawyer is inclined to work h_L hours, a number less than h^* .³⁶ The lawyer's and the client's economic interests come into stark conflict. The lawyer who truly serves his client must penalize himself; the self-interested lawyer underworks.

5. *Performance of the Proposed Contingent Hourly-Percentage Fee*

Our proposed solution to the alignment problem is the contingent hourly-percentage fee. This proposed fee, paid only in the

³³ For example, at $h = 10$ hours, the settlement is \$1760, the fee is \$586.67, the opportunity cost to the lawyer is \$500, and the lawyer's profit is \$86.67. That extra hour of lawyer's time had an opportunity cost of \$50, but the fee increased by only \$46.67 from its ninth-hour level of \$540. Therefore, it was not in the lawyer's best interests to have worked that tenth hour.

³⁴ See note 32 *supra*.

³⁵ See note 33 *supra*.

³⁶ For the illustrative case depicted in Figure 3, $h_L = 9$, $h^* = 12$, and $h_C = 16$. In all cases, $h_L < h^* < h_C$. For a proof of this, see Appendix B. Cf. note 26 *supra*.

event of recovery,³⁷ is the sum of two simple components: (1) the lawyer's time charge for the hours devoted to the case, and (2) a percentage of the amount by which the gross recovery exceeds that time charge. Under the assumptions and terminology of the model, the first component is equal to w times h , where again w is the certain hourly wage and h is the number of hours worked. This first component pays the lawyer for his time—that is, for his opportunities forgone. The second component is equal to some percentage (x) of s minus wh , where again s is the settlement. This compensates the lawyer for those inevitable cases that will prove unsuccessful. As we shall show, this second component aligns the client's and the lawyer's economic interests. Any positive value of x under 100% solves the alignment problem;³⁸ therefore, x may be fixed by the market or may be regulated to serve any relevant policy goals.³⁹ For illustrative purposes, we shall use a value of 10% for x .

We can thus represent the proposed fee by the formula $wh + x(s - wh)$.⁴⁰ The reader can visualize it as a segregation of the contingent lawyer's two functions: laborer and insurer. The lawyer merits compensation not only for his time, but also for the risk he allows his client to shift onto him by means of the contingency aspect of the fee. The contingent percentage fee crudely lumps payment for these two functions into a single percentage component. The proposed fee separates payment for the dual functions into two components, thus permitting rationalization of the fee structure and solution of the alignment problem.

Figure 4 shows the relationship between the proposed fee and the number of hours worked. For each h , the height of the new fee curve (f_n -curve) represents the fee earned if settlement were then consummated. As always, the client's net recovery is the difference between the settlement and the fee. For example, if the lawyer

³⁷ In the event of a recovery smaller than the computed fee, the client would not be liable for the deficiency. We introduce this qualification to promote other policy concerns (see text accompanying note 91 *infra*), not to induce economic alignment.

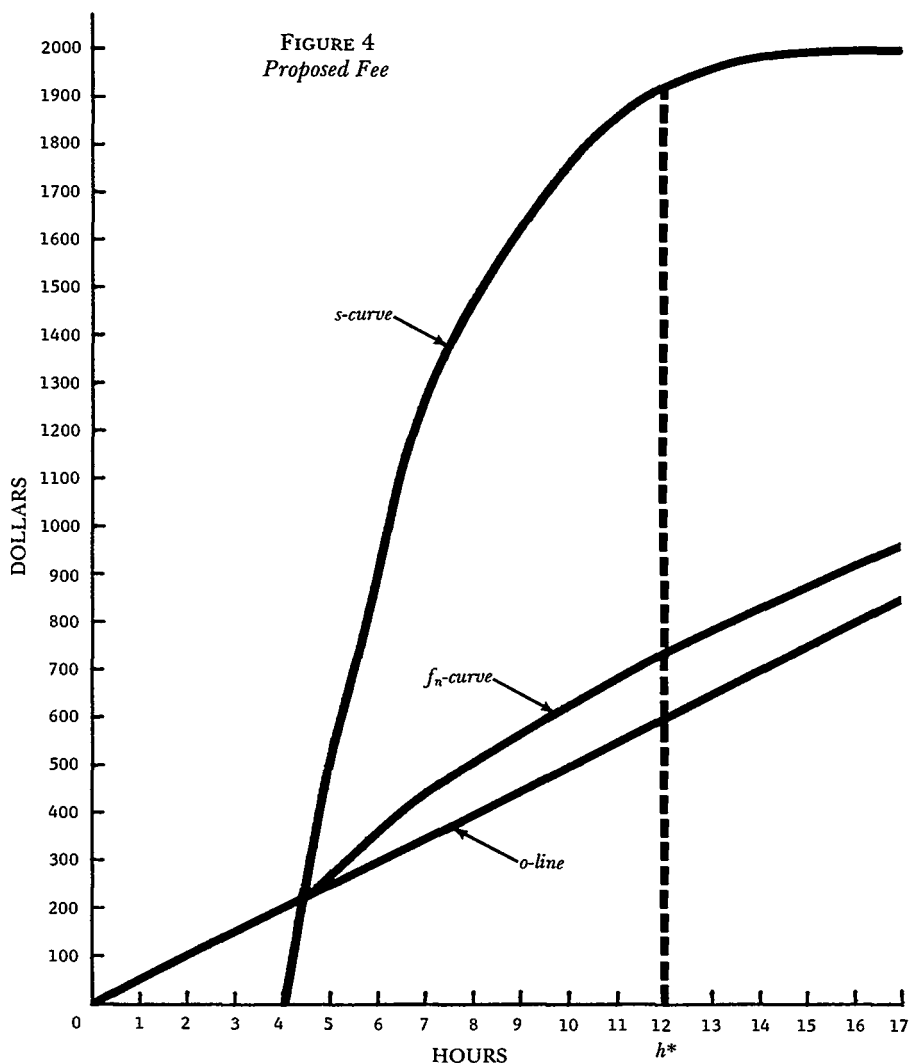
³⁸ For a proof, see Appendix C.

³⁹ See text accompanying notes 175-83 *infra*.

⁴⁰ Because the client is not liable for the deficiency when the computed fee exceeds the recovery (see note 37 *supra*), this formula does not provide a full description of the proposed fee. Nevertheless, to avoid unnecessary complications, we shall use this formula without qualification in our subsequent calculations. Cf. note 30 *supra*. Such simplification will affect our alignment analysis only when we enter the world of uncertainty. See text accompanying note 79 *infra*. Even there the effect will not be significant. See notes 272 & 289 *infra*. Cf. notes 300 & 303 *infra*.

works 10 hours, the settlement will be \$1760, the lawyer's fee will be \$626,⁴¹ and the client will receive a net recovery of \$1134.

The client's aim, by now familiar, is to choose the number of lawyer's hours required to maximize his net recovery or, equivalently, to maximize the vertical distance between the *s-curve* and the *f_n-curve*. That particular number of hours occurs at the point where



⁴¹ $626 = 50 \cdot 10 + .10(1760 - 50 \cdot 10)$.

the tangents to the s -curve and the f_n -curve become parallel.⁴² This condition occurs at h^* hours, precisely the same number of hours the client would have chosen under the certain hourly fee.⁴³ Turning to the illustrative case in Figure 4, we see that the point where the client's interests are best served, h^* , occurs at 12 hours under the proposed fee. At that point, the settlement is \$1920, the fee is \$732, and the client's net recovery reaches a maximum of \$1188. No other h would yield the client a larger net recovery.⁴⁴ Thus, to serve the client's best interests, the lawyer should work h^* hours, no more and no less.

The lawyer's economic interests finally align with his client's. The lawyer still desires to work the number of hours required to maximize his profit or, equivalently, to maximize the vertical distance between the f_n -curve and the o -line. That particular number of hours occurs at the point where the tangent to the f_n -curve becomes parallel to the o -line,⁴⁵ but this condition is met at h^* hours, precisely the same number of hours that would maximize the client's net recovery under the proposed fee.⁴⁶ In Figure 4, h^* occurs at 12 hours. At that point, the fee is \$732, the opportunity cost to the lawyer is \$600, and the lawyer's profit reaches a maximum at \$132. No other h would yield the lawyer a larger profit.⁴⁷ Thus, to serve his own best interests, the lawyer should work h^* hours, no more and no less.

In sum, the certain hourly fee leaves the client wanting the lawyer to work h^* hours and leaves the lawyer feeling indifferent. Under the contingent percentage fee, the client wants the lawyer to

⁴² In mathematical terms, $ds/dh = df/dh$ at the client's optimal point. In economic terms, the marginal settlement equals the marginal fee at that point. For a proof of this, see Appendix C.

⁴³ See text accompanying note 24 *supra*. For a proof, see Appendix C.

⁴⁴ At $h = 11$ hours, the settlement is \$1860, the fee is \$681, and the client's net recovery is \$1179. At $h = 13$ hours, the settlement is \$1960, the fee is \$781, and the client's net recovery again is \$1179. These figures compare unfavorably with the client's \$1188 net recovery at $h = 12$ hours. Therefore, the client's best interests dictate that the lawyer work beyond eleven hours, but that he settle before working the thirteenth hour.

⁴⁵ In mathematical terms, $df/dh = w$ at the lawyer's optimal point. In economic terms, the marginal fee equals the opportunity cost at that point. For a proof of this, see Appendix C.

⁴⁶ Cf. note 26 *supra*. For a proof, see Appendix C.

⁴⁷ At $h = 11$ hours, the fee is \$681, the opportunity cost to the lawyer is \$550, and the lawyer's profit is \$131. At $h = 13$ hours, the fee is \$781, the opportunity cost is \$650, and again the lawyer's profit is \$131. These figures compare unfavorably with the lawyer's \$132 profit at $h = 12$ hours. Therefore, the lawyer's best interests dictate that he work beyond eleven hours, but that he settle before working the thirteenth hour.

work at least h_c hours, but the lawyer wishes to underwork at h_L hours. The proposed contingent hourly-percentage fee solves this economic conflict of interest problem—the lawyer, prompted solely by self-interest, is inclined to work the precise number of hours that best serves his client.

B. *Relaxing the Model's Assumptions*

The discussion in Section A of Part II rests on an economic model of the real world. Using the model's list of assumptions, we showed that the proposed contingent hourly-percentage fee solves the problem of economic conflict of interest by perfectly aligning the interests of lawyer and client. We must now determine how valid the conclusions of Section A remain when we return to the real world by relaxing the four questionable assumptions of the model.⁴⁸

This task is forbidding, if not impossible. On the one hand, it requires complete knowledge of the real world. On the other hand, full analysis requires highly sophisticated tools, even if one takes into account only those complexities of the real world that one can perceive and comprehend.

Yet we must take a stab at the task, if our proposal is to be more than an academic game. This exercise in relaxing assumptions also exposes the need and provides a vehicle for fleshing out the structure of the proposed fee. Accordingly, we shall attempt relaxation in a rough-and-ready way. Two tentative conclusions will emerge: (1) alignment under the contingent hourly-percentage fee is not perfect, but (2) this does not imply that reality diminishes the proposed fee's superiority over the two present fee systems—indeed, certain complexities of the real world may even enhance our fee's superiority.

1. *Effects of the Lawyer's Workload—Relaxing Assumption (5)*

The economic model rests on a two-part assumption concerning the workload of the plaintiff's lawyer: (1) the lawyer has no idle time, and (2) the time devoted to the plaintiff's case would otherwise have been devoted to matters handled at the lawyer's certain hourly wage. These dual assumptions are not entirely unrealistic. Lawyers have an increasing amount of freedom to lower their fee rates or otherwise to enhance their attractiveness to clients in order to obtain enough work to keep themselves busy; also many per-

⁴⁸ See text accompanying notes 17-21 *supra*.

sonal-injury lawyers fill in their time with at least some work on a certain hourly basis.⁴⁹ However, these assumptions will not always hold true, so we must examine the effect that relaxing them has on the conclusions of Section A. Such relaxation makes the proposed fee even more attractive relative to the two present fee systems.

Consider the dual assumptions in reverse order. The assumption that time devoted to the plaintiff's case would otherwise have been devoted to certain hourly work, if devoted to any work at all, is not at all essential to the analysis of Section A. We adopted it simply for ease of expression, because it provided a readily expressible opportunity cost. If, as in the case of a pure personal-injury specialist, the lawyer were giving up time that he would otherwise devote to cases not on a certain hourly basis, an opportunity cost would still exist, and would equal the effective hourly wage the lawyer could earn by putting in additional work on those cases.⁵⁰ Once this opportunity cost is derived and w is set equal to it, the analysis of Section A will lead to the same conclusions regarding alignment.

The assumption that the lawyer has no idle time, on the other hand, is quite important. It implied that there was some legal work, on a certain hourly basis or otherwise, that the lawyer could do in lieu of his work on the plaintiff's case. This assumption thus gave each hour devoted to the plaintiff's case a positive opportunity cost, to which w could be pegged. However, when the lawyer has idle time—hours that he would like to fill with paying legal work but cannot—the opportunity cost of legal work forgone drops to zero. Only when the idle time is exhausted does opportunity cost regain a positive value. Therefore, if idle time exists, we cannot depict the opportunity cost line as we did in Figures 2, 3, and 4.

⁴⁹ This certain hourly work tends to be the least remunerative (*cf.* note 177 *infra*); thus, the lawyer would tend to give up this work as he devotes more time to the plaintiff's case. Hence, the second part of the assumption remains realistic even when the lawyer's certain hourly work constitutes only a minor portion of his workload.

⁵⁰ See Schwartz & Mitchell, *supra* note 10, at 1134 n.14, 1138 n.20. The lawyer distributes his time among all of his cases that are not on a certain hourly basis so as to equalize his marginal expected fee on each. See note 84 *infra*. If he devoted an extra hour to the plaintiff's case, he would cut back slightly on all his other such cases to maintain that equality. That marginal expected fee, then, would be his opportunity cost. Since the cut-back would be spread out among all of the lawyer's other such cases, this opportunity cost would be virtually constant over the number of hours conceivably allocable to the plaintiff's case. Thus, the *o*-line in Figures 2, 3, and 4 accurately depicts opportunity cost, and the analysis of Section A remains unchanged. *Cf.* note 61 *infra*.

Instead, if the lawyer has a certain number of hours (h_i) of idle time, we must shift the *o-line* to the right to show that the first h_i hours devoted to the client's case have an opportunity cost of zero. Figure 5 illustrates the shift for h_i equal to 8 hours. This shifting of the *o-line* has no effect on the client's interests, since his goal is simply to maximize the difference between the settlement and the fee. But the lawyer's aim relates to his opportunity cost, so shifting the *o-line* might affect his strategy.

To analyze this effect on the lawyer's strategy, we make three preliminary points. First, a lawyer does not blindly fix some number of hours that he will devote each week to legal work, no matter how small the pay. More realistically, we may presume that every lawyer has a minimally acceptable hourly wage, a rate below which he will not do legal work because he would be unable to cover his variable costs, would find another job instead, or would prefer to perfect his tennis game.⁵¹ Idle time, then, means those hours that the lawyer would like to fill with legal work, but cannot fill with work paying at least his minimally acceptable hourly wage.

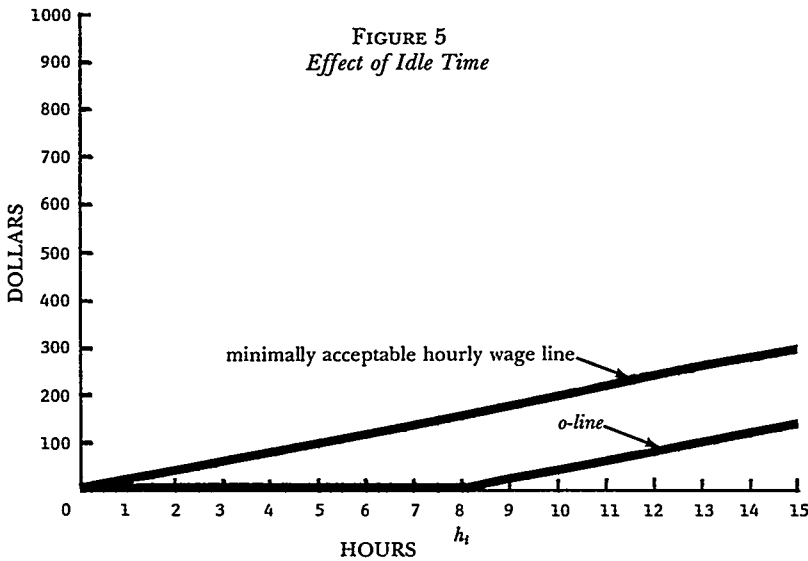
Second, before the lawyer would tolerate idle time, he would lower his certain hourly wage for new matters to this minimally acceptable level,⁵² and would then work all his certain hourly matters for as long as his conscience, the authorities, and his clients allow. He would also work all of his other cases until his effective hourly wage thereon decreased to his minimally acceptable hourly wage.⁵³ Presumably, idle time could exist only after the lawyer has taken these steps.

⁵¹ This can be viewed as the opportunity cost of forgoing doing something else, including the possibility of doing nothing. To the extent that we are focusing on a broader range of the lawyer's interests, rather than solely on his monetary desires, we are here also relaxing assumption (1). As depicted in Figure 5, the lawyer's minimally acceptable hourly wage presumably would remain virtually constant over the number of hours conceivably allocable to the plaintiff's case. Cf. note 61 *infra*.

⁵² A lawyer might not lower his certain hourly wage all the way to the minimally acceptable level. Market imperfections like price fixing or advertising restrictions might prevent such a strategy or prevent it from being effective in attracting business, or the lawyer might find himself unable to price his new matters selectively. However, such an elevated certain hourly wage will usually have no effect on the analysis of this Subsection, except to make the lawyer even more inclined to overwork the plaintiff's case if taken under the certain hourly fee. There are usually no other effects because the lawyer still will work those cases not on a certain hourly basis until his effective hourly wage thereon decreases to his minimally acceptable hourly wage; thus, once idle time has been consumed, the opportunity cost of legal work forgone will still equal his minimally acceptable hourly wage. If, however, the lawyer's workload other than the plaintiff's case is entirely on a certain hourly basis, and that certain hourly wage has not fallen to the minimally acceptable level, then we must resort to the more general analysis suggested in note 61 *infra*.

⁵³ See note 50 *supra*.

FIGURE 5
Effect of Idle Time



Third, after the lawyer has managed to occupy any idle time that does exist, his opportunity cost of legal work forgone starts climbing. It climbs at a rate equal to the wage earned on the lawyer's least remunerative work—*i.e.*, his minimally acceptable hourly wage. Graphically, the *o-line* in Figure 5 begins to run parallel to the minimally acceptable hourly wage line as soon as idle time disappears. Thus, while idle time exists, the lawyer will not work below his minimally acceptable hourly wage; the same is true after idle time has been exhausted, because his opportunity cost then equals that minimally acceptable hourly wage. Therefore, although w should normally be equated to the lawyer's opportunity cost, in the idle-time context w should be set equal to his minimally acceptable hourly wage. Let us assume it is so set. We can now consider the strategy of the lawyer with idle time under each of the three fee systems.⁵⁴

If the lawyer has accepted the plaintiff's case on a certain hourly basis with a wage w , he will be inclined to work at least until he occupies all his idle time. Idle time, after all, means hours the lawyer would like to fill with legal work paying at least his minimally acceptable hourly wage. In graphic terms, the slope of the *f_n-line* exceeds the slope of the *o-line* until the lawyer works h_i

⁵⁴ For a more general approach to problems introduced by idle time, see note 61 *infra*. Cf. Schwartz & Mitchell, *supra* note 10, at 1145-47, 1161 (discussing effects of idle time under administered wage).

hours, because for values of h less than h_i the slope of the f_h -line is w while that of the o -line is zero. This difference in slopes induces the lawyer to work at least h_i hours. After he has worked h_i hours, the lawyer will become indifferent to working additional hours, because for values of h greater than h_i the f_h -line and the o -line are parallel. Thus, the lawyer will not become indifferent until he has reduced his idle time to zero by working h_i hours. If $h_i > h^*$, the lawyer will be inclined to overwork relative to the client's best interests.⁵⁵ Indeed, h_i may be so high that the lawyer would be inclined to work until his fee consumes the settlement or even until the "victorious" client ends up owing his lawyer money.

This brings up an important, but somewhat parenthetical, point: The lawyer's indifference under the certain hourly fee does not survive relaxation of the model's assumptions. As just shown, the idle lawyer has direct economic interests that sharply conflict with those of his client. In the real world the lawyer's self-interest will cause him to fall from the precarious point of indifference in many other circumstances. For example, the overburdened lawyer will be inclined to put in fewer than h^* hours. Since the attorney under the certain hourly fee does not get a piece of the action, he will not inevitably devote each hour to its most efficient use; instead, he may put off distasteful tasks. Similarly, the attorney will have no direct economic incentive to work as diligently as he can. His fee increases by the hour, not by what that hour produces.⁵⁶ In short, indifference is a dream induced by the economic model; returning to the real world shatters that dream. Therefore, when choosing between the certain hourly fee and the proposed fee, one chooses not between indifference and alignment but between misalignment and alignment.⁵⁷

Under the contingent percentage fee, the lawyer with idle time will still be inclined to work to h_L : the point where the lawyer's

⁵⁵ Of course, the presence of idle time will cause a change in fee rates, so the actual value of h^* here does not necessarily equal the actual value of h^* under conditions without idle time. The same is true for h_L . However, the analysis remains unaffected.

⁵⁶ See text accompanying note 101 *infra*. Cf. note 20 *supra* & note 87 *infra*.

⁵⁷ Here we are not speaking of lawyer-client misalignment with respect to interest in outcome. Introduction of the complexities of the real world into the economic model will likely induce alignment of their interests in outcome under the certain hourly fee, because most conceivable noneconomic or indirect influences on the lawyer would push him to seek victory regardless of the certainty of his fee. Thus, it is not the failure of the certain hourly fee to create direct economic alignment with respect to interest in outcome that prompts us to make our proposed fee contingent. Rather, our reasons flow from the other problems of certainty of payment discussed in the text accompanying notes 91-98 *infra*.

marginal fee—the slope of the $f_{\%}$ -curve—falls to w .⁵⁸ If $h_i < h_L$, the lawyer will have no reason to stop work at h_i hours because each additional hour between h_i and h_L will pay him at a rate greater than his opportunity cost. In other words, between h_i and h_L the slope of the $f_{\%}$ -curve is greater than w and hence greater than the slope of the o -line, thus inducing the lawyer to work on to h_L where the slopes of the $f_{\%}$ -curve and the o -line become equal. But if $h_i \geq h_L$, the lawyer will stop at h_L , since beyond h_L his marginal fee falls below its minimally acceptable level, w . Thus, given idle time, the lawyer will still be inclined to work h_L hours, which is less than the h_C hours of work the client would wish.

Under the proposed contingent hourly-percentage fee, the lawyer with idle time will still work to h^* , which is the point where the slope of the f_n -curve equals w , and which is also the number of hours the client would choose his lawyer to work.⁵⁹ If $h_i < h^*$, the slope of the f_n -curve between h_i and h^* will be greater than w and hence greater than the slope of the o -line, thus inducing the lawyer to work on to h^* where the slopes of the f_n -curve and the o -line become equal. But if $h_i \geq h^*$, the lawyer will stop at h^* , since beyond h^* his marginal fee falls below its minimally acceptable level, w . Thus, even given idle time, lawyer-client alignment remains perfect.

In sum, introduction of idle time does nothing to weaken the theoretical conclusions of Section A. In a comparative sense, the presence of idle time increases the attractiveness of the proposed fee over the certain hourly fee, without decreasing its alignment superiority over the contingent percentage fee.

A final caveat is in order, however. The no-idle-time analysis of Section A rests on the assumption that w in the proposed fee was fixed precisely at the lawyer's opportunity cost. Similarly, the foregoing idle-time analysis rests on the assumption that w in the proposed fee was fixed precisely at the lawyer's minimally acceptable hourly wage. We therefore stress that w in the proposed fee should be set, as closely as possible, at the minimally acceptable hourly wage for those lawyers with idle time or at the higher opportunity cost for those lawyers without idle time. However, such precision rarely exists in real life. The lawyer may be arbitrary or deluded in fixing w .⁶⁰ Indeed, if the relevant standard—minimally

⁵⁸ Cf. text accompanying note 31 *supra*.

⁵⁹ Cf. text accompanying note 46 *supra*.

⁶⁰ Alternatively, the relevant standard—minimally acceptable hourly wage or opportu-

acceptable hourly wage or opportunity cost—has a low actual value, w will more likely be fixed too high. The proposed fee will misalign the economic interests of lawyer and client to the extent that w is not precisely fixed.⁶¹

2. *Effects of Delay—Relaxing Assumption (2)*

In the economic model, we assumed that the lawyer and the client were indifferent to delay. Under this assumption, \$1000 would be equally attractive whether received today or a year from today; \$1001 a year from today would be more attractive than \$1000 today. This assumption is obviously unrealistic. Money has a time value—a dollar today is worth more than a dollar a year from today, because one could invest that dollar. Moreover, the lawyer and his client may differ in their attitudes toward delay and in their access to the capital market.

The analysis in Section A justifiably ignored these complications, because the amount of time, h , that the lawyer might conceivably spend on the plaintiff's case is so small that delay has only imperceptible effects. The decision on whether to work one more hour will not turn on the effects of delaying recovery by an hour's work.

In Section A, however, we dealt with the question of how long the lawyer will *work* on the case before recovering, not how long he will *wait* before recovering. In other words, we inquired how much

nity cost—may not be a linear function of h , thereby precluding precision in fixing w . See note 61 *infra*. Cf. notes 50 & 51 *supra*.

⁶¹ For example, if w in the proposed fee is fixed above the relevant standard, the lawyer will be inclined to overwork until the slope of the f_n -curve equals that relevant standard. Conceivably, the lawyer could then work such a great number of hours that his fee would consume the entire settlement. Cf. note 52 *supra*. If w is fixed below the relevant standard, then the lawyer will be inclined to underwork.

Furthermore, the relevant standard might not be a linear function of h , but rather be an ascending curve. Opportunity cost might be an ascending curve if the lawyer were forced to give up increasingly lucrative work as he devoted more and more time to the plaintiff's case. The minimally acceptable hourly wage might be an ascending curve if the lawyer became less desperate as he made more and more money beyond his most basic needs. An ascending curve would also result if a kink occurred at h_i (where the relevant standard shifts from minimally acceptable hourly wage to opportunity cost) because market imperfections or other factors prevented opportunity cost from dropping to the minimally acceptable hourly wage. See note 52 *supra*. In the event of such an ascending curve, if w is set greater than the slope of the curve at h^* , the lawyer will tend to overwork. If w is set less than the slope of the curve at h^* , the lawyer will tend to underwork. Of course, if the value of the ascending curve as a function of h were known precisely, that value could replace the wh terms in the formula for the proposed fee. Alignment under the proposed fee would then remain perfect.

of the lawyer's work will be invested in the case, not how that work will be spread out over time. Only for the latter question—a distinct kind of conflict between lawyer and client considered later⁶²—do the economic effects of delay become significant.

3. *Effects of Other Costs—Relaxing Assumption (6)*

The economic model ignores all costs except the cost of the time of the plaintiff's lawyer. In reality, both the lawyer and his client likely will incur various and substantial expenses during the course of the case's life. These expenses complicate description and analysis, but do not significantly affect the conclusions of Section A.

Client's expenses fall into two categories: (1) litigation expenses that he will share with his lawyer, and (2) litigation expenses that the client must bear alone.

The first category includes only those litigation expenses that the lawyer deducts from the gross settlement before applying his percentage to determine his fee. This method of computation means that the lawyer contributes to those expenses in proportion to his percentage.⁶³ The lawyer-client contract generally determines when this method will apply, but the category might include such items as filing fees, expenses of investigation and medical examination, witness fees, printing and duplicating costs, and communication and travel disbursements. Graphically, first-category expenses shift downward and reshape the *s-curve*. But the *s-curve* affecting the lawyer's interests undergoes the same change as the one affecting the client's interests, so they remain one and the same. Consequently, the conclusions of Section A regarding alignment would suffer no effect if we made these first-category expenses a part of the model.

There is a lesson here regarding the operation of the proposed fee: To the extent feasible, all litigation expenses that fall on the client or that will be shifted to him should be treated in the above manner. Certainly, the lawyer should have to deduct from the gross settlement all his disbursements chargeable to the client *before*

⁶² See text accompanying notes 144-46 *infra*; note 165 and accompanying text *infra*.

⁶³ See F. MACKINNON, *supra* note 1, at 66-67; note 3 *supra*. By our definition, the first category of expenses exists only under fee structures with a percentage component. Under the usual lawyer-client contract providing for a certain hourly fee, either the client or the lawyer alone assumes each expense. If the lawyer-client contract, on a certain hourly basis or otherwise, provides for some idiosyncratic fractional sharing of expenses, then the fractions can simply be viewed as two distinct expenses, with the client bearing one alone and the lawyer bearing the other alone.

he calculates his fee.⁶⁴ This will help to preserve the proposed fee's alignment.

In the second category of client's expenses—those that he will not share with his lawyer—fall all his other litigation expenses. These include most prominently the cost of the client's time consumed by the litigation process, but likely also include the client's transportation costs, child-care expenses, and so forth. We can divide this second category into two groups: (1) fixed costs, and (2) costs that vary with h . Costs in the first group are lump-sum expenditures that the client must make to press his claim. Such expenses have no effect on the conclusions of Section A; they shift the client's *s-curve* down, but leave its shape unaltered. The second group, however, not only shifts the client's *s-curve* down but also flattens it out. The presence of such expenses therefore encourages the client to settle sooner than under the expense-free model.

To summarize regarding client's expenses, only those litigation expenses that fall solely on the client and that vary with h affect the alignment conclusions of Section A. Such expenses incline the client to settle sooner, regardless of the fee structure.

Relevant lawyer's expenses fall into three categories: (1) business expenses in the nature of overhead that are not related to any particular case, (2) litigation expenses linked to the plaintiff's case that the lawyer will share with the plaintiff, and (3) litigation expenses linked to the plaintiff's case that the lawyer must bear alone.

The first category includes rent, utilities, library costs, and the like. Because these expenses lower the net fee on all matters that the lawyer handles, they have no effect on the conclusions of Section A. Graphically, these expenses have the same downward effect on both the opportunity cost line and the fee curve, so the lawyer's strategy remains unchanged—he will work the same number of hours as in the expense-free model.

The second category of lawyer's expenses reshapes in the same manner the relevant *s-curve* for both lawyer and client. As ex-

⁶⁴ Cf. N.Y. App. Div. R. 603.7(e)(3) (1st Dep't) (listing items attorney should deduct and should not deduct from gross recovery before applying percentage); D. ROSENTHAL, *supra* note 2, at 108 (attorney may transfer some expenses to client, but should deduct them from gross recovery before calculating fee); *Columbia Study*, *supra* note 2, at 23 & n.109 (discussing view that attorney should deduct expenses from gross recovery before calculating fee so that fee constitutes fraction of benefit received by client). The lesson here is not a surprising one. It is obvious that to preserve alignment such expenses should be treated in the same manner as is the lawyer's time charge—*i.e.*, they should be deducted before application of the percentage.

plained above, this leaves the alignment conclusions of Section A unaffected.⁶⁵

In the third category of lawyer's expenses—those linked to the plaintiff's case that the lawyer must bear alone—fall all his other litigation expenses. These include most prominently salaries of employees (secretaries and paraprofessionals⁶⁶) working on the case, but likely also include office supplies and similar incidental expenses. We can divide this third category into two groups: (1) fixed costs, and (2) costs that vary with h . The first group has no effect on the conclusions of Section A, because such expenses merely shift the fee curve down without altering its shape.⁶⁷ The

⁶⁵ See text accompanying note 63 *supra*. This Subsection still deals with a world of certainty. When we shift into a world of uncertainty (see text accompanying note 79 *infra*), the risk arises that recovery might be insufficient to cover this second category of expenses. One must then consider the practice of lawyers in contingent fee cases of advancing these expenses but not collecting them from the unsuccessful client. See note 3 *supra*. To the extent of that risk, these expenses thus become third-category lawyer's expenses for contingent fee lawyers.

⁶⁶ In a law office, associates' salaries can be treated just as are secretarial expenses if the associates' services are not separately billed. However, under hourly fees, the more common practice is to bill for the hours spent by each lawyer, associate or partner. See M. MAYER, *supra* note 4, at 20. Cf. ABA COMM. ON ETHICS & PROFESSIONAL RESPONSIBILITY, INFORMAL OPINIONS, No. 1333 (1975) (attorney may bill time of unadmitted law clerk if client acquainted with legal limitations on clerk's scope of responsibilities). If associates' (or even paraprofessionals') time is so billed, it is better to view the expense as an aspect of a more general problem: What happens when two or more lawyers work together on the plaintiff's case—*i.e.*, when we move from the world of the sole practitioner to the world of the law firm?

Under this more general analysis, we need not distinguish associates from partners. If a firm has n lawyers working on a case, it wants to maximize the difference between the fee and the accumulated opportunity cost to the firm of the n lawyers' time. That the firm comprises associates as well as partners merely affects how the fee is split up, not the firm's work strategy. Analysis of that work strategy takes us into n -space, forcing us to leave behind our two-dimensional graphs. Nevertheless, given the assumptions of the economic model, an n -space analysis yields the same results: The law firm would be indifferent to the number of hours each lawyer works under the certain hourly fee; the law firm would underwork under the contingent percentage fee; and the interests of the firm and the client (not only with respect to total number of hours worked, but also with respect to number of hours worked by each lawyer) would align under the proposed fee. For a proof of this, see Appendix D.

The proposed fee in the law firm setting would be $w_1h_1 + w_2h_2 + \dots + w_nh_n + x(s - w_1h_1 - w_2h_2 - \dots - w_nh_n)$, where w_k and h_k are, respectively, the hourly billing rate of and the hours worked by lawyer k .

⁶⁷ The textual discussion in this Subsection does not treat each fee system separately, because expenses tend to affect the analysis for all three fee systems similarly. But see notes 63 & 65 *supra*. There is, however, one important distinction. Under the certain hourly fee, the lawyer can recoup his fixed expenses only by increasing the hourly wage. By this method alone can the lawyer ever move from his deficit position back to his opportunity cost line. Increasing the hourly wage, however, will give the f_n -line a steeper slope than the

second group, however, not only shifts the fee curve down but also flattens it out. To analyze this effect, we must divide the costs that vary with h into two subgroups: (1) variable costs typical of such variable costs incurred in the lawyer's other work, and (2) atypical variable costs. The former subgroup does not affect Section A's conclusions, because the opportunity cost line and the fee curve undergo the same changes.⁶⁸ The latter subgroup, however, does have an impact: If the plaintiff's case presents atypically light variable costs, the lawyer will be inclined to work more hours than under the expense-free model; if the variable costs are atypically heavy, the lawyer will be inclined to work fewer hours.

One particular kind of lawyer's expense—the forwarding fee—merits special mention. Lawyers in the personal-injury field often receive cases through referral. As a matter of professional responsibility, the forwarding lawyer may share in any eventual fee only “in proportion to the services performed and responsibility assumed” by him.⁶⁹ In practice, however, a forwarding lawyer who has done virtually nothing commonly receives between one-fourth and one-half of the total fee.⁷⁰ If the forwarding fee is a set dollar figure, then it is a fixed cost borne by the working lawyer and, as just shown, will not affect the conclusions of Section A. If, on the other hand, the forwarding fee is a fraction of the total fee, then it is an atypically heavy variable cost and will incline the lawyer to work fewer hours.⁷¹ Nevertheless, this tendency to work less is not

o-line, which in turn will influence the certain hourly lawyer to overwork relative to his client's best interests. Therefore, strictly speaking, the statement in the text—that fixed costs borne by the lawyer do not affect the conclusions of Section A—is true only for the proposed fee and the contingent percentage fee.

⁶⁸ Cf. Schwartz & Mitchell, *supra* note 10, at 1156 n.A1 (assuming that “out-of-pocket costs . . . occur in a fixed relationship to lawyer manhours”).

⁶⁹ ABA CODE OF PROFESSIONAL RESPONSIBILITY DR 2-107(A)(2). *But cf.* note 140 *infra*.

⁷⁰ See M. BLOOM, *supra* note 2, at 143-46; J. CARLIN, *LAWYERS' ETHICS* 200 (1966); F. MACKINNON, *supra* note 1, at 180-81; D. ROSENTHAL, *supra* note 2, at 99-100; *Columbia Study*, *supra* note 2, at 13, 27; Grady, *supra* note 5, at 22-23; Special Subcomm. of Defense Research Comm., *supra* note 3, at 206-08.

⁷¹ If the forwarding lawyer is to receive a fraction (y) of the fee (f), the working lawyer will keep only $(1 - y)f$. So instead of working until $df/dh = w$, the working lawyer will stop when $df/dh = w/(1 - y)$. Since $y < 1$, we know that $w/(1 - y) > w$. Therefore, under the contingent percentage fee the lawyer will work fewer than h_L hours, and under the proposed fee the lawyer will work fewer than h^* hours. However, this tendency to underwork will be offset to the extent that the working lawyer charges higher fee rates for referred cases than for non-referred cases. See *Columbia Study*, *supra* note 2, at 27-28. Fractional forwarding fees apparently are not common in certain hourly cases (see sources cited note 70 *supra*); if used, they would incline the lawyer to underwork to the point of refusing the case. However, if he could increase his certain hourly wage to $w/(1 - y)$, the lawyer would again become indifferent to number of hours worked.

an important concern here because, as we shall later show, the proposed fee discourages forwarding fees.⁷²

To summarize regarding lawyer's expenses, only those expenses that (1) are linked to the plaintiff's case, (2) are borne solely by the lawyer, (3) are variable with h , and (4) are atypical in relation to such variable expenses incurred in the lawyer's other work affect the alignment conclusions of Section A. When we speak *generally* about fee systems, we must assume that the expenses for any particular plaintiff's case will be typical.⁷³ Therefore, we can conclude that lawyer's expenses do not affect the alignment conclusions of Section A.

In the final analysis, introduction of costs other than the lawyer's time has only this small effect: To the extent that the client incurs variable costs that he must bear alone, the client will be inclined to settle sooner. This slightly disturbs the lawyer-client alignment under the proposed fee, leaving the lawyer inclined to overwork relative to his client's best interests. An offsetting effect, however, will appear upon introduction of uncertainty into the model, the effects of which we consider next.

4. *Effects of Uncertainty—Relaxing Assumption (3)*

Up to now the economic model has represented a world where the plaintiff's lawyer could operate free from all uncertainties. This implied a risk-free⁷⁴ economic environment in which the lawyer eventually settled in the plaintiff's favor every case taken on.⁷⁵ In the real world, of course, some cases—but not many—result in little or no recovery. Ordinarily, the plaintiff's lawyer can make a fairly good estimate of a case's value; accordingly, the overwhelming

⁷² See note 163 *infra*. Indeed, since fractional forwarding fees prevail only under the contingent percentage fee and since they tend to make the lawyer work fewer than h_L hours, the inclusion of forwarding fees in the economic model reinforces the conclusions of Section A regarding alignment.

⁷³ The only other plausible assumption regarding work done under the proposed fee is that expenses will be slightly heavier than those incurred in the lawyer's other work. One might base this assumption on the extra expenses the lawyer bears in an unsuccessful suit (see note 65 *supra*) or on any forwarding fees paid (but see text accompanying note 72 *supra*; note 163 *infra*). Under this assumption, the lawyer would tend to work fewer hours. This inclination would offset the effect of client's expenses, thus tending to restore the perfect alignment of lawyer's and client's interests under the proposed fee.

⁷⁴ Some economists draw a distinction between the terms "risk" and "uncertainty." See W. BAUMOL, *ECONOMIC THEORY AND OPERATIONS ANALYSIS* 574 (3d ed. 1972). We use the two terms interchangeably, however, to refer to situations where the outcome is not certain but where the probabilities of the possible outcomes can at least be estimated.

⁷⁵ See note 19 and accompanying text *supra*.

majority of his cases conclude with a settlement in the plaintiff's favor.⁷⁶ The assumption of certainty is thus not entirely unrealistic. Moreover, although the model assumed certainty, we did not construct the proposed fee on that assumption. We took into account the real world's inevitable element of uncertainty in two ways. First, we protected the client from uncertainty by making the proposed fee contingent. Second, we protected the lawyer from uncertainty by including the percentage component of the proposed fee, which serves to compensate him for his unsuccessful cases. Therefore, introduction of uncertainty is unlikely to invalidate the conclusions of Section A or to destroy the proposed fee.

To say more than that, however, requires detailed analysis and significant alterations in the modeling process.⁷⁷ As a starting point, we must recognize that the model involved three key elements of certainty. First, the plaintiff's lawyer knew that the defendant would be continually willing to settle. Second, the lawyer knew in advance the precise amount that the defendant would be willing to offer in settlement at any particular time. Third, the lawyer knew that such amount would at least ultimately be acceptable to him and his client.⁷⁸ When these three elements of certainty disappear, the lawyer who has accepted a case⁷⁹ faces a much

⁷⁶ See M. BLOOM, *supra* note 2, at 141-42; R. HUNTING & G. NEUWIRTH, WHO SUES IN NEW YORK CITY? 51, 106 (1962); M. MAYER, *supra* note 4, at 253-54; D. ROSENTHAL, *supra* note 2, at 58-59; H. ROSS, SETTLED OUT OF COURT 179 (1970); *Columbia Study*, *supra* note 2, at 10-11, 13-14; Posner, *A Theory of Negligence*, 1 J. LEGAL STUD. 29, 35 & n.14 (1972); Schwartz & Mitchell, *supra* note 10, at 1147-49. Researchers estimate that 98% of all personal-injury cases in which the plaintiff engages a lawyer are settled (89% are settled with plaintiff receiving payment, 9% with no payment), and that 2% go to judgment (with plaintiff and defendant enjoying approximately equal success). This means that the plaintiff obtains a recovery in 90% of all such cases. See, e.g., *Columbia Study*, *supra* note 2, at 10-11, 13-14. Cf. Schwartz & Mitchell, *supra* note 10, at 1155 n.45 (excluding death cases, only about 6% of all personal-injury claims with some objective economic loss are settled for less than that loss, and less than 4% result in no recovery). But cf. Dietz, Baird, & Berul, *supra* note 2, at 103-04 (settlement and recovery rates lower in medical malpractice cases).

⁷⁷ Unaltered, the modeling scheme of Section A permits only a partial relaxation of the certainty assumption. See, e.g., Schwartz & Mitchell, *supra* note 10, at 1147-54.

⁷⁸ The model involved a fourth element of certainty: The amount offered by the defendant was independent of the lawyer-plaintiff fee structure. We made this assumption simply for ease of comparison as we shifted from fee to fee. For each particular fee, however, the conclusion concerning alignment obviously did not rest on this assumption. Hence, relaxation of this assumption would not affect those conclusions of Section A; only the particular number of hours that the client would choose and the particular number of hours that the lawyer would be inclined to choose would change, not the degree to which their choices aligned. Cf. note 206 *infra*.

⁷⁹ We address the question of which cases a lawyer will accept under the various fee systems in the text accompanying notes 189-96 *infra*.

cloudier future. He is unsure how high the settlement offers will be; indeed, he is unsure that he will receive any positive settlement offers at all. After beginning to work on the case, he somehow must decide when he has worked enough.

To analyze how he will make this decision, we must further recognize that at any given time one of two possible situations will prevail: either (1) he will have in hand a settlement offer minimally acceptable to his client or to him,⁸⁰ thus forcing a decision on whether to accept it or to reject it and work on, or (2) he will not have such an offer in hand.

Up to now we have been considering whether the lawyer will be economically inclined to work the number of hours that best serves his client. In situation (1), we can rephrase this question as whether the lawyer's and the client's thresholds for acceptance of settlement offers coincide.⁸¹ If they do coincide, the lawyer will

⁸⁰ The minimum amount a plaintiff or his lawyer is willing to consider in settlement at any given time is governed by a complex set of factors, prominently including that person's current estimates of (1) the plaintiff's probability of recovery after trial, (2) the expected size of the plaintiff's recovery, if any, after trial, and (3) that person's expected further costs of litigating through trial. See note 84 *infra*. A more sophisticated, but basically similar, decision process would take into account current estimates of probability of an appeal, expected outcome on appeal, and expected costs of appeal. By weighing these factors, the person in question—the plaintiff or his lawyer—can determine whether he prefers to accept a given settlement offer rather than go to judgment. If so, we say that the offer is "minimally acceptable" to that person, and it may indeed be the offer he would choose to accept. Cf. note 81 *infra*.

The plaintiff's subjective estimate of any particular factor might, of course, differ from the corresponding subjective estimate of his lawyer. No fee structure can ensure that the estimates of lawyer and client will coincide, or take into account the reasons for and the degree of any differences. Nor is that related to our aim here. We seek to minimize built-in economic conflict of interest, not difference of opinion—our concern in Part II is whether the lawyer will be inclined to work for the client's economic best interests, not whether the lawyer will necessarily follow the dictates of what the client *thinks* are his economic best interests. Accordingly, we assume here that the plaintiff and his lawyer agree on their estimates (which is not unlikely, given that the client gets most of his information from his lawyer, who will try to convince his client of the soundness of the lawyer's estimates) or, alternatively, that the lawyer's estimates are in fact sounder than the plaintiff's (which is also not unlikely, given the lawyer's usually greater knowledge and objectivity). In this Subsection, then, we shall narrow our consideration to that set of estimates of probabilities and expected values arrived at by the lawyer.

Minimal acceptability also turns on the plaintiff's and his lawyer's attitudes toward risk and litigation. We consider attitudes toward risk in note 86 and accompanying text *infra*. No fee structure can take into account the plaintiff's or his lawyer's attitudes toward litigation—traits such as vindictiveness, litigiousness, the desire to keep the insurance company honest, and their opposites. Nor is that our aim here. Accordingly, we assume that such attitudes toward litigation are neutral.

⁸¹ We must distinguish two questions relating to settlement offers. One is whether a given settlement offer is minimally acceptable; the other is whether the given offer would

tend to work as long as his client's interests dictate; if not, the lawyer will tend either to underwork or to overwork relative to his client's best interests.

To put this situation into the graphic terms we have used thus far, we must convert the *s-curve* into a series of discrete points representing settlement offers actually received at time *h* that were then minimally acceptable to either the lawyer or his client. At each new point the lawyer and, theoretically, his client⁸² must decide whether to accept that offer or to work on, taking into account the uncertainty as to the existence and size of the next minimally acceptable offer. The crucial question is to what extent their decisions are in agreement.

Assuming that the lawyer and his client are risk-neutral,⁸³ we can derive and compare the thresholds of acceptance for the lawyer and the client under the various fee systems. The lawyer would be inclined to accept any settlement offer that causes his profit to equal or exceed the expected value⁸⁴ of his profit at higher values of *h*; the client would want to accept any settlement offer that causes his net recovery to equal or exceed his expected net recovery at higher values of *h*. We can show that although the lawyer's and the client's thresholds of acceptance do not precisely coincide under the proposed fee (the lawyer having the lower threshold), their thresholds coincide more closely there than under the two present fee systems.⁸⁵ In practical terms, under the pro-

actually be accepted. We discuss the first question—the threshold of “minimal acceptability”—in note 80 *supra*; the answer results from comparing the offer with the option of going to judgment. The answer to the second question—the threshold of “acceptance”—results from comparing the offer with the option of taking one's chances on future offers. See text accompanying note 84 *infra*.

⁸² See ABA CODE OF PROFESSIONAL RESPONSIBILITY EC 7-7, 7-8.

⁸³ A risk-neutral person treats expected values (see note 84 *infra*) as though they were certain values. For example, given the choice between a 50% chance of winning \$100 and the certain receipt of \$50, a risk-neutral person would be indifferent. A risk-averse person, on the other hand, would prefer the certain \$50; he would require a larger expected value, say \$60, to bring him to indifference between that and a certain \$50. The \$10 excess is called a “risk premium” and serves to compensate the risk-avertter for taking the risk involved.

⁸⁴ The term “expected value” as used in this Article is a technical term from the theory of probability. It means, in effect, that the value is discounted according to its probability of occurring. For example, if there is a 90% chance of recovering \$1000 and a 10% chance of recovering nothing, the expected value of the recovery is \$900. More generally, if a quantity *z* can take on a set of possible values z_1, z_2, \dots, z_n , where *n* is a positive integer, and if the probability that *z* will take on each of these values is p_1, p_2, \dots, p_n , then the expected value of *z*, or $E(z)$, is $p_1z_1 + p_2z_2 + \dots + p_nz_n$. For a still broader definition of expected value, see note 267 *infra*.

⁸⁵ For a proof, see Appendix E.

posed fee and in a world of uncertainty, the lawyer will tend to settle somewhat sooner than would be ideal—he will be inclined to underwork relative to his client's best interests.

If we adopt the more realistic assumption that the lawyer is risk-neutral and that his client is somewhat risk-averse, the client's threshold of acceptance shifts downward, tending to bring the lawyer's and the client's thresholds of acceptance under the proposed fee back toward coincidence.⁸⁶ In practical terms, under the proposed fee and in a world of uncertainty, the risk-averse client will want to settle sooner than the risk-neutral client. Thus, the "underworking" lawyer under the proposed fee might in fact be serving well his risk-averse client.

In situation (2), no settlement offer minimally acceptable to either the plaintiff or his lawyer is in hand. Perhaps they have not yet received any such offer; perhaps they have received one or more such offers, but have rejected them. In either event, the lawyer must continue to work.⁸⁷ If the defendant later makes a settle-

⁸⁶ Introduction of attitudes toward risk precludes precision, because such attitudes are intangible and completely individualized. We must nevertheless consider them. In a world of uncertainty, risk attitudes will certainly affect client and lawyer behavior. The lawyer and the client will seek to maximize a broader range of interests, taking into account risk attitudes as well as monetary desires. (To this extent, then, we are here also relaxing assumption (1).) See Schwartz & Mitchell, *supra* note 10, at 1162.

In the context of our present discussion, risk-aversion means that a person will not reject a settlement offer unless his expected profit (or net recovery) at some higher value of h exceeds the sum of his profit (or net recovery) under the offer plus some risk premium. This lowers the threshold of acceptance and causes the person to wish to settle at a lower value of h than would a risk-neutral person. Cf. *id.* at 1149-50, 1153, 1161-62 (analogous risk analysis).

In the real world, we can expect the lawyer to be virtually risk-neutral. If he is working for a certain fee and has taken steps to assure payment regardless of outcome, he will incur almost no risk. If he is working for a contingent fee and handles a substantial number of cases, he will tend to be risk-neutral because he can spread the risk. See *id.* at 1150-51, 1153; text accompanying note 94 *infra*. The client, on the other hand, will tend to be somewhat risk-averse. See note 92 *infra*. Generally, under a contingent arrangement the client will exhibit less risk-aversion than under a certain fee, because a contingent fee permits the client to shift some of the risk of loss to his lawyer. See text accompanying note 94 *infra*. Cf. Schwartz & Mitchell, *supra* note 10, at 1150 ("The contingent [percentage] fee narrows the range of fluctuation in net settlement value by eliminating the chance of negative net settlement and by trimming the client's share of an unexpectedly high settlement.").

Thus, given the assumption of a risk-neutral lawyer and a somewhat risk-averse client, we can state in the text that the lawyer's and the client's thresholds of acceptance converge. However, if the client is highly risk-averse, or if the lawyer is risk-averse, or if either exhibits risk-preference, then the statement in the text no longer holds true and the misalignment could be exaggerated.

⁸⁷ After comparing the probability of eventual settlement with the probability of going to judgment, the lawyer would tend to direct his efforts so that each additional hour brings

ment offer minimally acceptable to either the client or the lawyer, the foregoing analysis becomes applicable. This leaves only the scenario in which no such settlement offer is in hand and no such settlement offer is later received. The question in this event becomes whether, in going to judgment, the lawyer will be economically inclined to work the number of hours that best serves his client.

Once again, although the lawyer's and the client's interests in the number of hours to be worked do not align perfectly under the proposed fee, the alignment there does not seem to compare unfavorably with the alignment under the two present fee systems.⁸⁸ At any rate, the proposed fee's performance with respect to alignment in this judgment setting does not have major significance. This setting encompasses only 2% of all personal-injury cases that lawyers handle; the other 98% result in settlement.⁸⁹

In sum, after the introduction of uncertainty the proposed fee no longer perfectly aligns the economic interests of lawyer and client, but it still substantially improves upon the two present fee systems. Uncertainty generally causes the lawyer who operates under the proposed fee to underwork somewhat. But the client's expenses and his risk-aversion offset this effect by disposing the client to desire fewer lawyer's hours. Admittedly, this comparison of effects is gross, but we find it significant that the various effects are offsetting rather than cumulative. Thus, after relaxation of the model's assumptions, the proposed fee survives; it still aligns the economic interests of lawyer and client significantly better than the certain hourly fee or the contingent percentage fee.

III

OTHER PROBLEMS OF PRESENT FEE SYSTEMS

Part II demonstrated that the proposed contingent hourly-percentage fee largely solves one important problem common to

the maximum possible increment in the expected value of the recovery. *Cf.* note 20 & text accompanying note 56 *supra*; text accompanying note 101 *infra*.

⁸⁸ For a proof, see Appendix F.

⁸⁹ See note 76 *supra*. Furthermore, the visibility of the courtroom probably counteracts any economic conflict of interest that may theoretically exist here. The lawyer is less likely to pursue his own interests out in the open than to do so behind the scenes during the settlement process. Lastly, in all candor, we have now reached a rather rarefied level of analysis. In the judgment setting, we are calling on the decisionmaker to compare two uncertain, multicomponent quantities. Such a decision process has largely forsaken verisimilitude and has surpassed the capabilities of even those decisionmakers willing to employ it. Thus, the conclusions of Appendix F, even if unambiguous, would not likely be significant or particularly reliable.

both the certain hourly fee and the contingent percentage fee: the problem of economic conflict of interest between lawyer and client. Each of the two polar fee systems, however, has other serious drawbacks that merit consideration.⁹⁰

A. *Problems of the Certain Hourly Fee*

1. *Problems Due to the Certain Nature of the Fee*

The principal problem associated with requiring payment of a fee regardless of outcome is that the fee may preclude access to the legal system by the poor.⁹¹ Every potential litigation involves the risk that the recovery will be insufficient to offset the costs of litigation, including the expensive investment in lawyer's time. When payment of the lawyer's fee is on a certain basis, the client bears the entire risk of such a loss. The poor litigant may be reluctant to bear that risk.⁹² Moreover, the lawyer wants assurance of payment before he performs his services.⁹³ The poor litigant, even if willing to bear the risk of loss, will probably be unable to provide that assurance. In contrast, a contingent fee provides the client a convenient means of shifting some of the risk of loss to the lawyer and of obtaining legal services without assurance of payment. The contingent fee lawyer charges a premium to cover the attendant costs; over the long run his successful cases will compensate him for his unsuccessful ones.⁹⁴ Thus, a fee system on a contingent rather than a certain basis is better suited to offering lower-income groups access to legal services.

Another problem frequently attributed to a certain fee is the plaintiff's possible dissatisfaction with having to pay his lawyer for

⁹⁰ In Part IV, we shall determine to what extent the contingent hourly-percentage fee solves or minimizes these drawbacks. See text accompanying notes 157-70 *infra*.

⁹¹ See ABA CODE OF PROFESSIONAL RESPONSIBILITY EC 2-20, 2-24, 5-7; Corboy, *Contingent Fees: The Individual's Key to the Courthouse Door*, LITIGATION, Summer 1976, at 27, 27-29, 34-35; Radin, *Contingent Fees in California*, 28 CALIF. L. REV. 587, 589 (1940); Youngwood, *The Contingent Fee—A Reasonable Alternative?*, 28 MOD. L. REV. 330, 334 (1965); Comment, *supra* note 4, at 330-32.

⁹² Poor litigants are not the only ones who hesitate to risk paying a certain fee for a losing case; even many who can afford to pay a lawyer are risk-averse in the litigation setting. See R. HUNTING & G. NEUWIRTH, *supra* note 76, at 105-06; note 86 *supra*. Therefore, the argument in the text regarding access to legal services extends beyond the poor to risk-averse litigants in general.

⁹³ See F. MACKINNON, *supra* note 1, at 21.

⁹⁴ Cf. ABA CODE OF PROFESSIONAL RESPONSIBILITY DR 2-106(B)(8) (whether fee is fixed or contingent should serve as guide in proving its reasonableness); F. MACKINNON, *supra* note 1, at 182-83 (discussing fairness of overcharging some clients to offset undercharges to others); note 86 *supra*.

a losing effort.⁹⁵ The notion that the lawyer guarantees only representation and not a particular outcome may not temper the client's sensation of inequity. Indeed, the suspicion that the certainty of the lawyer's fee resulted in indifferent representation by the lawyer may intensify this sensation of inequity. To the extent that our legal system sees party satisfaction as a goal,⁹⁶ this problem is a serious one. Here again a contingent arrangement has a relative advantage:⁹⁷ Conditioning payment on outcome increases client satisfaction.⁹⁸

2. *Problems Due to the Hourly Nature of the Fee*

Since the size of an hourly fee depends on the number of hours the lawyer has devoted to the case, the lawyer working under this type of fee has the burden of keeping careful records.⁹⁹ More importantly, an hourly fee entails the risk that an unscrupulous lawyer will charge his client for more hours than he actually worked, because the client has no foolproof way to verify the time claimed by the lawyer. The relative advantage of a percentage fee is that the number of hours is irrelevant in computing the fee.

Another shortcoming of an hourly fee is that it measures im-

⁹⁵ See R. HUNTING & G. NEUWIRTH, *supra* note 76, at 49.

⁹⁶ See C. CURTIS, *IT'S YOUR LAW* 3-4 (1954).

⁹⁷ See Radin, *supra* note 91, at 587; Comment, *supra* note 4, at 340 n.56. *But see id.* at 339 n.53:

These [contingent] contracts debase the profession by valuing successful services only, and equate successful outcome with successful practice. The contingent fee . . . ignores the duty of the bar to educate the public that the right to a day in court is worth something, even if the cause is itself lost.

⁹⁸ This listing of real and alleged problems of the two polar fee systems is not exhaustive. Instead, we limit our focus to the more serious drawbacks and the more frequently voiced attacks. For example, we have omitted from the textual discussion of problems due to the certain nature of the certain hourly fee the argument that "[t]he contingent fee is the only way for a young attorney to get a start. Until he has a reputation as a successful attorney, retainer clients will go elsewhere." Comment, *supra* note 4, at 340 n.56. A certain fee may also entail collection difficulties when there is no recovery, leading to unseemly fee disputes between lawyer and client. See *id.* Another problem is that a certain fee discourages potential plaintiffs from seeking legal advice and from seeking it early, when it can be most useful and effective. See Hughes, *The Contingent Fee Contract in Massachusetts*, 43 B.U.L. REV. 1, 10-11 (1963); Youngwood, *supra* note 91, at 333. Finally, other problems of a certain fee are suggested in note 92 *supra* and by negative implication in text accompanying notes 112, 124, & 128 *infra*.

⁹⁹ On the other hand, it is desirable always to have time records kept so that the client and the authorities could know how much time the lawyer has spent. See Grady, *supra* note 5, at 21. Indeed, compulsory time records may even be to the lawyer's advantage, since this might increase the efficiency of his operation. See M. PIRSIG & K. KIRWIN, *CASES AND MATERIALS ON PROFESSIONAL RESPONSIBILITY* 269 n.13 (3d ed. 1976).

perfectly the value of the legal services rendered.¹⁰⁰ This leads to problems associated with undervaluation and overvaluation: The lawyer may receive no reward for displays of exceptional professional ability, or the client may have to pay far more than the worth of legal services rendered. Undervaluation results in a lack of direct economic incentive for the lawyer to work as diligently and efficiently as possible.¹⁰¹ Overvaluation becomes most obviously acute when the hours mount and the fee grows so large that it approaches or even exceeds the size of the recovery; because the lawyer operating under an hourly fee has no direct economic incentive to work the number of hours demanded by the client's best interests,¹⁰² the possibility of a disproportionately large hourly fee is quite real. Contrast a percentage fee. Although plagued with even greater measurement imperfections,¹⁰³ a percentage fee does take into account an element of the value of legal services that an hourly fee ignores: results obtained.¹⁰⁴ Thus, a lawyer working for a percentage will dependably make every hour he works count most effectively in terms of recovery. Moreover, a percentage fee by definition can never consume the client's recovery.¹⁰⁵

B. *Problems of the Contingent Percentage Fee*

1. *Problems Due to the Contingent Nature of the Fee*

One problem of a contingent fee is that it might lead to overreaching by the lawyer in setting the fee.¹⁰⁶ When the fee is set in advance and made contingent upon recovery, a promise to pay a sizable fee may not seem unreasonable to the eager and inexperienced plaintiff. A certain fee has the relative advantage of encouraging greater client attentiveness and assertiveness when the fee is set.

Another common objection to a contingent fee is that it gives

¹⁰⁰ See ABA CODE OF PROFESSIONAL RESPONSIBILITY DR 2-106(B); F. MACKINNON, *supra* note 1, at 19.

¹⁰¹ See text accompanying note 56 *supra*. Cf. notes 20 & 87 *supra*.

¹⁰² See text accompanying notes 23-26 *supra*.

¹⁰³ See text accompanying notes 130-43 *infra*.

¹⁰⁴ See Hughes, *supra* note 98, at 13. See also ABA CODE OF PROFESSIONAL RESPONSIBILITY DR 2-106(B)(4). But cf. note 7 *supra*.

¹⁰⁵ Here again the list is not exhaustive. Among other possible problems of an hourly fee are those suggested in note 147 *infra* and by negative implication in note 143 and text accompanying note 149 *infra*.

¹⁰⁶ See Youngwood, *supra* note 91, at 333; Comment, *supra* note 4, at 339 n.53. But see Corboy, *supra* note 91, at 33.

the lawyer a speculative interest in the claim. This objection has deep historical roots,¹⁰⁷ but more recently it has come to rest on arguments that the speculative nature of the lawyer's interest is inconsistent with professional detachment and that this converts lawyering from a profession into a mere business.¹⁰⁸ Real problems nestle in these somewhat rhetorical arguments. The lawyer's economic interest in the outcome may tempt him to use improper tactics for ensuring victory and to slight his duties as an officer of the court; further, the lawyer may find himself unable to act disinterestedly in advising his client and unwilling to allow client participation in controlling the lawsuit.¹⁰⁹ In other words, when one shifts from the lawyer's theoretical indifference concerning outcome under a certain fee to alignment of the lawyer's and the client's direct economic interests in outcome under a contingent fee, the result may be an increase in abuses caused by the lawyer's economic self-interest. Yet there are several reasons to believe that these problems are not as severe as they might appear. First, the lawyer's theoretical indifference under a certain fee is a myth. Pure indifference cannot exist in reality. In the real world, the lawyer normally faces many pressures other than contingency that push him to seek victory. Direct economic alignment through contingency may not significantly increase that urge to win.¹¹⁰ Second, because of the other pressures for victory, noneconomic or indirect controls on excessive zeal and loss of impartiality exist anyway.¹¹¹ These controls should help to minimize any increase in abuses by the lawyer that contingency might induce. Third, direct economic alignment brings with it at least three benefits that offset the problems it induces: (1) a virtual guarantee of at least that amount of zeal on which our adversary-advocacy system depends, (2) a virtual guarantee that those inevitable departures from indifference (and hence from impartiality) on the part of the lawyer will be in the direction of alignment rather than misalignment of lawyer's and client's interests,¹¹² and (3) an increase in client satisfaction stemming from the feeling that his lawyer is his partner in interest.¹¹³

¹⁰⁷ See Radin, *Maintenance by Champerty*, 24 CALIF. L. REV. 48 (1935); Comment, *supra* note 4, at 334-35.

¹⁰⁸ See J. COHEN, *THE LAW: BUSINESS OR PROFESSION?* 205-16 (1916).

¹⁰⁹ See F. MACKINNON, *supra* note 1, at 196, 200-01; Comment, *supra* note 4, at 339 & n.53.

¹¹⁰ See note 57 *supra*.

¹¹¹ See text accompanying note 12 *supra*.

¹¹² See generally *id.*

¹¹³ See text accompanying notes 97-98 *supra*.

Still another problem that critics attribute to a contingent fee is the clogging of court dockets.¹¹⁴ To refute this contention as a general matter, we need only restate it as an argument for lightening court burdens by closing the courthouse doors to certain meritorious suits, especially suits brought by the poor.¹¹⁵ Yet when the critics phrase their contention more finely, rebuttal is not as easy. Consider the finer formulations of this general argument.

Some argue that a contingent fee encourages the filing of groundless speculative suits—*i.e.*, suits where the probability of recovery is small but the recovery, if any, would be large.¹¹⁶ Our legal system relies on ethical¹¹⁷ and economic restraints on client and lawyer to discourage such suits. The question here is whether changing from a certain to a contingent fee is likely to encourage suits of this kind. Since a contingent fee allows a plaintiff to sue without significant financial risk,¹¹⁸ contingency would encourage him to file. However, the risk of loss does not disappear; it simply shifts to the plaintiff's lawyer. Since contingency makes his fee depend on the outcome, the lawyer would shy away from any case with a probability of success so low that it makes the case a poor investment. Thus, it is not at all clear that a contingent fee encourages groundless speculative suits.¹¹⁹ Indeed, a contingent fee may be more effective than a certain fee in deterring such suits. Under a certain fee the restraining influence of the lawyer decreases; therefore, our legal system must rely more heavily on the client's self-restraint. But in most instances the client cannot perform the screening function as well as the lawyer. The client is in a uniquely poor position to evaluate his claim objectively and knowledgeably. The risk-neutral client's condition for bringing suit under a certain fee is less stringent than the risk-neutral lawyer's condition for

¹¹⁴ See R. HUNTING & G. NEUWIRTH, *supra* note 76, at 50-51; F. MACKINNON, *supra* note 1, at 201; L. PATTERSON & E. CHEATHAM, *supra* note 3, at 275.

¹¹⁵ See text accompanying notes 91-94 *supra*.

¹¹⁶ See Radin, *supra* note 91, at 589; Comment, *supra* note 4, at 339 n.53.

¹¹⁷ See FED. R. CIV. P. 11; ABA CODE OF PROFESSIONAL RESPONSIBILITY DR 2-109, 7-102(A)(1) & (2).

¹¹⁸ In the United States the losing party usually does not have to pay the attorneys' fees of his successful opponent. See generally *Alyeska Pipeline Serv. Co. v. Wilderness Soc'y*, 421 U.S. 240, 247-71 (1975). Moreover, the contingent fee lawyer usually does not hold his losing client responsible for litigation expenses. See F. MACKINNON, *supra* note 1, at 69; note 3 *supra*. But a contingent fee does not eliminate the client's financial and psychological disincentives to bringing suit; it merely reduces them.

¹¹⁹ See HEW REPORT, *supra* note 2, at 32-33; F. MACKINNON, *supra* note 1, at 201; Corboy, *supra* note 91, at 32; Dietz, Baird, & Berul, *supra* note 2, at 118; Comment, *supra* note 4, at 339-40.

bringing suit under a contingent fee.¹²⁰ Although the client will often be risk-averse and therefore will shrink from the risk of greater loss under a certain fee,¹²¹ this may not effectively deter groundless speculative suits, because a certain fee presents the client with the chance for an even bigger windfall, thus heightening the "pot of gold" mentality¹²² necessary to prompt such suits.¹²³ In other words, under a contingent fee the primary screening function shifts to the lawyer, and the lawyer will probably do a more effective screening job. We can at least conclude that contingency itself¹²⁴ gives little or no encouragement to groundless speculative suits.

Others argue that a contingent fee encourages the filing of nuisance suits—*i.e.*, suits where there is a good chance the defendant will buy off the plaintiff in order to save the costs of litigation.¹²⁵ Our legal system depends most heavily on clients' self-restraint and lawyers' ethics¹²⁶ to screen out such cases. The change from a certain to a contingent fee will not likely undermine that screening process. Because a nuisance suit involves a low number of lawyer's hours and has a good chance of success, the client might be less willing to sue under a contingent fee than under a certain fee.¹²⁷ The lawyer, economically motivated under a contingent fee

¹²⁰ To show this, let $E(R)$ be the expected recovery, $E(f)$ the expected certain fee, $E(F)$ the expected contingent fee, and $E(H)$ the expected number of the lawyer's hours involved; assume also that $E(R)$ and $E(H)$ are independent of the conditionality of payment. The client's condition for bringing suit under a certain fee is $E(R) \geq E(f)$. Since a certain fee is presumably set at the lawyer's opportunity cost, $E(f) = wE(H)$. Therefore, the client's condition for bringing suit becomes $E(R) \geq wE(H)$. The lawyer's condition for bringing suit under a contingent fee is $E(F) \geq wE(H)$. Whether by law or custom (*cf.* note 3 *supra*), a lawyer cannot fix a contingent fee so high that he captures the whole recovery. In other words, a contingent fee is presumably set so that $E(F)$ is substantially less than $E(R)$. Therefore, since $E(F) < E(R)$, the lawyer's condition for bringing suit is more stringent than the client's.

¹²¹ See note 92 *supra*.

¹²² *Cf.* note 124 *infra*.

¹²³ *Cf.* HEW REPORT, *supra* note 2, at 33-34 (medical malpractice). This proposition justifiably assumes that a certain fee would be smaller than a contingent fee in the event of victory, since a contingent fee must compensate the lawyer for the risk he has borne.

¹²⁴ Visions of a huge fee might induce the lawyer to overestimate the probability and rewards of success, or might stimulate any risk-preference characteristics on his part, thereby weakening his screening capability. But this is a direct consequence of the size of the fee, not of its contingency. See text accompanying notes 134-35 *infra*.

¹²⁵ See L. PATTERSON & E. CHEATHAM, *supra* note 3, at 275; Radin, *supra* note 91, at 589; Comment, *supra* note 4, at 339 n.53.

¹²⁶ See FED. R. CIV. P. II; ABA CODE OF PROFESSIONAL RESPONSIBILITY DR 2-109, 7-102(A)(1) & (2).

¹²⁷ *Cf.* Comment, *supra* note 4, at 340 ("[T]he time involved, generally, in pressing a

to invoke his more effective screening faculties, will also be less willing to sue. Here again we can at least conclude that contingency itself¹²⁸ gives little or no encouragement to nuisance suits.¹²⁹

2. Problems Due to the Percentage Nature of the Fee

A percentage fee's principal shortcoming is that it measures poorly both the cost to the lawyer and the value to the client of the legal services rendered. This leads to a host of problems.

Because it measures poorly the cost to the lawyer of services rendered, a percentage fee discourages the bringing of small, meritorious claims.¹³⁰ A percentage, which tends to have an upward limit imposed by law or custom,¹³¹ of a small recovery might not compensate the lawyer for the cost of the hours he must put into the case. As a result, the lawyer will refuse the case regardless of its merit. An hourly fee enjoys the relative advantage of covering the lawyer's cost;¹³² therefore, the client can arrange for representation in any case that has a positive expected net recovery.

Also by measuring poorly the cost to the lawyer of services rendered, a percentage fee causes certain cases to yield an exorbitant profit for the lawyer.¹³³ For example, a case of serious per-

nuisance action is slight, and, therefore, the contingent fee offers only a small advantage over a retainer to the client.").

¹²⁸ The contingent percentage fee could encourage nuisance suits if the percentage is fixed high enough to overcome the lawyer's ethical and economic reluctance. However, that problem stems from the percentage nature of the fee, not from its contingency. See text accompanying notes 134 & 136 *infra*.

¹²⁹ Again, this list of real and alleged problems of a contingent fee is not exhaustive. See, e.g., note 97 *supra*.

¹³⁰ See HEW REPORT, *supra* note 2, at 19, 33; MCGILL REPORT, *supra* note 3, at 193-94; Dietz, Baird, & Berul, *supra* note 2, at 118.

¹³¹ See note 3 *supra*. Cf. note 120 *supra*.

¹³² Cf. ABA CODE OF PROFESSIONAL RESPONSIBILITY DR 2-106(B)(1) & (2) (reasonableness of fee measured in part by lawyer's time and labor required and opportunities forgone).

¹³³ See Grady, *supra* note 5; Comment, *supra* note 4, at 339 n.53. But see *id.* at 340 n.56; cf. text accompanying note 104 *supra*. We are concerned here with profit from a particular case, and not profit from a lawyer's entire run of cases. Overall, contingent percentage fee lawyers do not do excessively well compared to the rest of the profession. See F. MAC-KINNON, *supra* note 1, at 124-36, 182. Cf. HEW REPORT, *supra* note 2, at 33 (medical malpractice); Dietz, Baird, & Berul, *supra* note 2, at 114-16 (same). However, the individual lawyer may fare better in contingent percentage fee work than he would in other lines of legal work. See note 177 *infra*. To the extent that the lawyer's earnings in contingent percentage fee work average above his normal hourly wage, other problems arise. For example, supernormal profit will cause lawyers to resist strongly reform of the fee system. But problems stemming from long-run excessive earnings directly involve only the size of the percentage charged, not the mere fact that a percentage measure is being used.

sonal injury where the defendant's liability is relatively clear might produce a big settlement after the lawyer has worked only a few hours; after applying the agreed percentage¹³⁴ the lawyer would pocket a very lucrative fee. The possibility of such a premium leads to a series of subproblems. First, impairment of the lawyer's screening faculties by the "pot of gold" mentality may encourage groundless speculative suits.¹³⁵ Second, the premium may override the lawyer's ethical and economic reluctance to bring nuisance suits.¹³⁶ Third, solicitation of lucrative cases is a natural by-product.¹³⁷ Fourth, the premium sometimes prompts the lawyer to impinge upon his client's freedom of choice by forcing a percentage fee on the client.¹³⁸ Fifth, the premium induces other ethical violations by causing the lawyer to view a proffered case as a valuable commodity; thus, the lawyer sometimes will refuse to refer the case away even though he ethically should¹³⁹ or will demand a heavy forwarding fee even though he ethically should not.¹⁴⁰ Sixth, the occasional exorbitant profit leads to public resentment,¹⁴¹ which may not be tempered by the thought that in the long run the lawyer's profits and losses average out to a nonexorbitant level. An hourly fee enjoys a relative advantage here, since it is a more accurate measure of the attorney's cost, and therefore tends to avoid the problems of exorbitant profit in particular cases.

¹³⁴ See note 182 *infra*.

¹³⁵ See HEW REPORT, *supra* note 2, at 33-34; note 124 *supra*. Cf. text accompanying note 124 *supra*.

¹³⁶ Cf. text accompanying note 128 *supra*.

¹³⁷ See M. FREEDMAN, LAWYERS' ETHICS IN AN ADVERSARY SYSTEM 113-25 (1975); F. MACKINNON, *supra* note 1, at 202-03. Cf. ABA CODE OF PROFESSIONAL RESPONSIBILITY DR 2-103 (solicitation prohibited except in limited circumstances). One's view of the gravity of this subproblem will be proportional to one's distaste for solicitation.

¹³⁸ See Grady, *supra* note 5, at 25-26. Cf. ABA CODE OF PROFESSIONAL RESPONSIBILITY EC 2-20 (lawyer should decline employment on contingent fee basis if client able to pay unless fully informed client desires such arrangement); Foonberg, *Cases and Clients That Should Be Turned Down*, BARRISTER, Fall 1976, at 10, 53 (where early settlement is unlikely, lawyer is advised to "convince the client that a non-contingency hourly rate payable in advance is best for him"); notes 2 & 4 *supra* and note 177 *infra*.

¹³⁹ See ABA CODE OF PROFESSIONAL RESPONSIBILITY DR 6-101(A); D. ROSENTHAL, *supra* note 2, at 101-02.

¹⁴⁰ See ABA CODE OF PROFESSIONAL RESPONSIBILITY DR 2-107(A); M. BLOOM, *supra* note 2, at 143-46; D. ROSENTHAL, *supra* note 2, at 99-100; Grady, *supra* note 5, at 22-23; text accompanying note 70 *supra*. One can persuasively argue that given the current imperfections in the market for lawyers' services, this ethical prohibition is misguided; a client might be better off paying a fee for referral than having no referral at all. See Morgan, *The Evolving Concept of Professional Responsibility*, 90 HARV. L. REV. 702, 719-21, 741-42 (1977). Referral for a fee might not be a problem; conditioning referral on the heavy forwarding fee now prevalent is rightly considered a problem.

¹⁴¹ See D. ROSENTHAL, *supra* note 2, at 97-98.

Because it measures poorly the value to the client of the lawyer's services, a percentage fee raises the problems of (1) the unfairness in paying far more than the services' worth¹⁴² and (2) the consequent client dissatisfaction.¹⁴³

A percentage fee has shortcomings other than poor measurement of cost and value. A percentage fee may introduce a conflict of interest regarding the timing of recovery. The client, in the face of mounting medical bills and loss of income, may desperately need cash. Furthermore, the client may be unable to neutralize his consequent aversion to delay by borrowing because he has no collateral and cannot borrow against his claim, either in the capital market¹⁴⁴ or from his lawyer.¹⁴⁵ The lawyer, on the other hand, is apt to have a lesser aversion to delay and better access to the capital market. Thus, the lawyer may be more willing than the client to wait in the hope that the defendant will offer a higher settlement or the court will award a larger judgment, thereby resulting in a heftier percentage fee.¹⁴⁶ An hourly fee's relative advantage is that the lawyer, unable to increase his fee by simply waiting, is more likely to follow the client's interest in the timing of recovery.¹⁴⁷

A percentage fee may also tempt the lawyer to use improper tactics in order to increase the recovery, and to slight his duties as an officer of the court. Further, it may render him unable to act disinterestedly in advising his client and unwilling to allow client participation in controlling the lawsuit. However, we have already

¹⁴² See F. MACKINNON, *supra* note 1, at 182-83. *But cf.* text accompanying notes 103-04 *supra*.

¹⁴³ See Stone & White, *The Public Image of the Legal Profession: 1960-1975*, 49 N.Y. St. B.J. 298, 330 (1977); Youngwood, *supra* note 91, at 333; Comment, *supra* note 4, at 339 n.53. *Cf.* text accompanying note 95 *supra*. *But see* L. PATTERSON & E. CHEATHAM, *supra* note 3, at 274 ("quantum meruit as measured by the result" is a basis of computation that "meets the ordinary man's view of a sensible basis of charges for intangible services as those of the lawyer").

¹⁴⁴ See Schwartz & Mitchell, *supra* note 10, at 1125-26, 1154.

¹⁴⁵ See ABA CODE OF PROFESSIONAL RESPONSIBILITY DR 5-103(B); Morgan, *supra* note 140, at 734-35.

¹⁴⁶ See F. MACKINNON, *supra* note 1, at 198-99. In more unusual situations, the lawyer might be less willing than the client to wait out the defendant. The point here is simply that giving the lawyer a percentage of the recovery opens the door to a conflict of interest over the timing of recovery.

¹⁴⁷ This proposition, however, is valid only if the hourly lawyer is being paid periodically, which is frequently the case. *Id.* at 21. Otherwise, the hourly lawyer would be inclined to settle as quickly as possible in order to recover his fee; waiting normally could only cost the lawyer money—i.e., the time value of his fee. In other words, an hourly fee payable only after completion of the case might create the opposite conflict of interest: The lawyer might be inclined to settle sooner than his client's interests call for.

discounted a similar argument concerning contingency.¹⁴⁸ In large part, the counterarguments used there carry over, weakening but certainly not destroying this objection to a percentage fee.¹⁴⁹

Critics further contend that a percentage fee encourages inflated claims.¹⁵⁰ The thrust of this argument is unclear: It may indicate dissatisfaction with inflated ad damnum clauses, with efforts by attorneys to obtain large settlements and judgments, or with excessive awards by juries. In any event, the validity of this criticism is questionable. First, the amount that the lawyer inserts in the ad damnum clause of his complaint has little significance. Moreover, eliminating the requirement of an ad damnum clause¹⁵¹ would more readily solve any problems caused by such a clause than would changing the fee structure.¹⁵² Second, the percentage nature of the fee may indeed prompt the lawyer to seek a larger recovery. But given the premises of our adversary-advocacy system, such an incentive in itself is not a disadvantage. We should applaud the advocate who zealously seeks the largest recovery he can obtain within the bounds of the law.¹⁵³ Third, public knowledge of the widespread use of a percentage fee may conceivably lead a jury to increase the size of its award in order to cover the anticipated fee. However, even if such compensatory inflation of awards does occur in practice (which has never been demonstrated¹⁵⁴), and even if

¹⁴⁸ See text accompanying notes 110-13 *supra*.

¹⁴⁹ The only change in the counterarguments is one of degree. The first counterargument in the certain-contingent context was that contingency might not significantly increase the pressure to win, since many other considerations also push the lawyer to seek victory. Similarly, there are usually many pressures besides a percentage fee that push the lawyer to seek a high recovery by methods other than investing more hours in the case. However, a percentage fee might push the lawyer to cross ethical bounds in order to seek a still higher recovery. Therefore, this first counterargument is not as strong in the hourly-percentage context, because the lawyer is not faced with a win-or-lose choice but with the question of how hard he should drive for a high recovery.

¹⁵⁰ See HEW REPORT, *supra* note 2, at 32; L. PATTERSON & E. CHEATHAM, *supra* note 3, at 275.

¹⁵¹ *E.g.*, N.Y. CIV. PRAC. LAW § 3017(c) (McKinney Supp. 1978).

¹⁵² See MCGILL REPORT, *supra* note 3, at 65, 201; Tondel & Chittenden, *Work of the Medical Professional Liability Commission*, 62 A.B.A.J. 1580, 1581 (1976). *Cf. House of Delegates Adopts Advertising D.R. and Endorses a Package of Grand Jury Reforms*, 63 A.B.A.J. 1234, 1238 (1977) (ABA approved elimination of ad damnum clauses in medical malpractice cases, provided defendant can reasonably ascertain amount claimed by plaintiff).

¹⁵³ See ABA CODE OF PROFESSIONAL RESPONSIBILITY EC 7-1. *Cf.* text accompanying note 148 *supra*.

¹⁵⁴ See F. MACKINNON, *supra* note 1, at 145-46; MCGILL REPORT, *supra* note 3, at 193; Kalven, *The Jury, the Law, and the Personal Injury Damage Award*, 19 OHIO ST. L.J. 158, 176-77 (1958). This qualification could have been made countless times before in this Arti-

this were an evil (which is not self-evident¹⁵⁵), it is certainly not clear that the percentage aspect of the fee is to blame. A similar inflation might occur if all fees were on an hourly basis, since the jurors would often presume an hourly fee to be substantial after they had seen the case go through a full trial.¹⁵⁶

C. Summary

Part III has explored the problems—other than economic conflict of interest concerning outcome and hours worked—that plague the two most common bases for fee computation. As we have shown, both the hourly and the percentage bases have serious drawbacks. An hourly fee presents the risk of bill-padding. Although it measures well the cost to the lawyer of the legal services rendered, an hourly fee can measure only partially the value to the client of those services. A percentage fee introduces its own unique problems: the lawyer-client conflict over the timing of recovery and the risk of ethical abuses inspired by the lawyer's percentage interest in the case. Further, a percentage fee measures poorly the cost and the value of services rendered.

In the foregoing pages we have also explored the problems of the two basic approaches to conditionality of fee payment. A certain fee has serious drawbacks. Most notably, it erects a barrier against the poor seeking access to the legal system, a drawback serious enough by itself to justify some kind of contingent fee. Additionally, a certain fee risks client dissatisfaction. On the other hand, contingency has only one unarguable drawback: The lawyer may overreach in setting the fee. The percentage aspect of the contingent percentage fee contributes most of the fee's problems and apparently stimulates most of the associated hostility.

cle. Arguments concerning the effect of fee structure are almost invariably cast in the form of assertion, and almost never subjected to economic or empirical study.

¹⁵⁵ See Posner, *supra* note 19, at 428-29, 437-39 (discussing effects of English rule—requiring losing party to reimburse winning party's attorneys' fees—on judicial administration).

¹⁵⁶ Again, this list of real and alleged problems of a percentage fee is not exhaustive. For example, some argue that the prevalence of a percentage fee encourages such practices as settling several claims as a group, occasionally fighting a case through trial just to keep the insurance company honest, and occasionally easing up on a case just to stay on the good side of the insurance company. See F. MacKinnon, *supra* note 1, at 199-200. Cf. S. Thurman, E. Phillips, & E. Cheatham, *Cases and Materials on the Legal Profession* 266 (1970) ("The broader problem suggests itself: Is the lawyer's obligation to negotiate the best possible settlement in a particular case ever in conflict with his desire for a general professional reputation?").

This summary irresistibly suggests reform. A combination of the hourly and percentage bases would more accurately measure cost and value, and contingency would avoid the drawbacks of a certain fee. In short, the contingent hourly-percentage fee appears as the natural reform, a reform that we shall now evaluate in greater detail.

IV

EVALUATION OF THE PROPOSED FEE

A. *Preferability*

1. *Advantages*

Part II showed the clear advantage of the proposed contingent hourly-percentage fee over the two present fee systems in minimizing economic conflict of interest between lawyer and client as to outcome and to hours worked. Part III surveyed the other problems of the two present fee systems. We shall now demonstrate that the proposed fee has the advantage of minimizing most of these drawbacks as well.

First, since the proposed fee retains no aspect of certainty of payment, it not only minimizes but eliminates the problems of a certain fee.¹⁵⁷ Thus, the proposed fee mitigates the inaccessibility of legal services to the poor and client dissatisfaction with having to pay for losing.

Second, the problems of a contingent fee remain under the proposed fee. But as just shown, these problems are slight.¹⁵⁸

Third, the proposed fee reduces the problems of an hourly fee. With its percentage component, the proposed fee is a better measure of the value of the legal services rendered. The percentage component rewards the lawyer for effective representation, thus giving him a direct economic incentive to work as diligently and efficiently as possible. Such is not the case under a pure hourly fee. Also, the proposed fee is less likely to result in the client's paying far more than the services' worth. For example, the proposed fee cannot possibly exceed the recovery¹⁵⁹ and, because of the alignment of lawyer's and client's economic interests, is less likely to

¹⁵⁷ Cf. note 118 *supra*.

¹⁵⁸ See notes 106-29 and accompanying text *supra*.

¹⁵⁹ See note 37 *supra*.

approach the size of the recovery than is a pure hourly fee. The lawyer can best serve his own economic interests under the proposed fee by working the amount of time that maximizes his client's net recovery; he would penalize himself by overworking to the point where his fee approaches the size of the recovery.

Fourth, the proposed fee reduces the problems of a percentage fee because (1) the proposed fee's combination of an hourly component with a percentage component results in a better overall measure of the cost to the lawyer and the value to the client of the legal services rendered, and (2) the proposed fee's percentage rate is much lower.¹⁶⁰ Because it better measures the cost to the lawyer, the proposed fee relatively encourages the bringing of small, meritorious claims.¹⁶¹ By the same virtue, the proposed fee eliminates the exorbitant profit that a pure percentage fee may yield in certain cases. Thus, we can expect the proposed fee to lower the incidence of groundless speculative suits, nuisance suits, solicitation, interference with the client's freedom of choice of fee,¹⁶² refusals to refer without a heavy forwarding fee,¹⁶³ and public resentment over exorbitant profit. Because it better measures the value to the client, the proposed fee alleviates the unfairness of excessive fees and the consequent client dissatisfaction.¹⁶⁴ Finally, because its percentage component is relatively small, the proposed fee mitigates the other shortcomings of a pure percentage fee: the

¹⁶⁰ See text accompanying notes 178-79 *infra*.

¹⁶¹ See text accompanying notes 192-96 *infra*.

¹⁶² Cf. notes 177-79 and accompanying text *infra*.

¹⁶³ See text accompanying notes 139-40 *supra*. See also note 71 and accompanying text *supra*. Since changing from a percentage fee to the proposed fee removes the possibility of exorbitant profit, the first lawyer ceases to view the proffered case as a valuable commodity. He becomes less determined to hang on to it or be bought off; he becomes more willing to refer away cases that he is unqualified to handle or too overburdened to treat adequately. Concomitantly, the second lawyer becomes much less willing to pay a forwarding fee, because the proposed fee better reflects the cost to that lawyer of the legal services he renders. In short, there is little or no fat in the proposed fee: The first lawyer is more willing to refer, and the second lawyer is less willing to pay for the referral. Just as heavy forwarding fees are not common practice where hourly fees prevail, we expect that they would not present a significant problem under the proposed fee. For further discussion of this point, see Appendix G.

¹⁶⁴ See text accompanying notes 95-98 & 142-43 *supra*. Client satisfaction is an unattainable goal, since some clients will be displeased no matter how the fee is computed. See sources cited note 143 *supra*. However, because the proposed fee is contingent and combines the measurement attributes of the hourly and percentage bases, it would probably satisfy many clients. The lawyer could enhance this effect by carefully explaining the proposed fee to the client; of course, such explanation is essential in the small cases where the proposed fee will consume a high fraction of the recovery.

conflict between lawyer and client over the timing of recovery¹⁶⁵ and the risk of ethical abuses inspired by the lawyer's percentage interest in the case.

2. *Disadvantages*

The only significant drawback of the two present fee systems that the proposed fee fails to abate is the possibility of abuse by the lawyer in setting the fee. The hourly component of the proposed fee continues the danger of bill-padding. The element of contingency continues the risk of overreaching by the lawyer. The lawyer could thus take advantage of the client by setting an excessive hourly wage or percentage rate for use in the proposed fee.

But this type of abuse is not peculiar to the proposed fee. The dishonest lawyer can somehow gouge his client under any fee. The choice is between the proposed fee, under which dishonest lawyers can take advantage of their clients, and the present fee systems, under which honest lawyers also are inclined to act contrary to their clients' interests.

To control abuse by the lawyer in setting the fee, we would subject the proposed fee to the usual restriction of reasonableness.¹⁶⁶ Only honesty and self-restraint on the part of lawyers, along with vigilance and willingness to discipline on the part of the authorities, can enforce this restriction. As always, there is no simple solution to lawyers' unethical behavior.

One might argue that in urging the proposed fee we abandon one of the virtues of a pure percentage fee: ease of regulation in the form of percentage rate ceilings.¹⁶⁷ The defect in this argument lies in the implicit belief that such ceilings are effective. The ease of imposing a percentage rate ceiling may be attractive, but such a step is unlikely to achieve its regulatory aim. A rate ceiling on a pure percentage fee will more likely result in some potential clients' inability to find lawyers who will even accept employment

¹⁶⁵ See text accompanying notes 144-46 *supra*. By making periodic fee payment impractical, the contingency aspect of the proposed fee would offset any remaining inclination of the lawyer to wait out the defendant in the hope of garnering a higher settlement or judgment, and hence a hefty percentage component. Waiting could increase only the small percentage component of the fee, not the hourly component; while waiting, the lawyer would be losing the time value of the whole fee. See note 147 *supra*. Thus, the lawyer operating under the proposed fee would probably not be more willing than the client to wait out the defendant. Cf. note 146 *supra*.

¹⁶⁶ See notes 3 & 5 *supra*.

¹⁶⁷ See note 3 *supra*.

under such a fee.¹⁶⁸ Those clients with cases valuable enough to ensure representation will have lawyers markedly inclined to underwork;¹⁶⁹ the consequent decrease in recovery will likely more than offset the decrease in fee.¹⁷⁰ Thus, percentage rate ceilings neither improve the client's position nor tie the fee to the cost or the value of the legal services rendered. Instead, such rate ceilings are largely cosmetic, keeping the final fee at what seems a reasonable level to the outside observer, while still permitting the lawyer covertly to pick and then milk (through underwork) the lucrative cases. Indeed, percentage rate ceilings resemble a speed limit that forbids traveling more than 55 miles in one hour: Lawyers will either stay home or take half-hour trips at 110 miles per hour.

B. *Feasibility*

The contingent hourly-percentage fee appears generally preferable to the two present fee systems. Despite its theoretical attractiveness, however, the proposed fee's acceptability ultimately depends upon its feasibility. Fortunately, the contingent hourly-percentage fee has several practical features that would facilitate its implementation.

First, the structure of the proposed fee is simple enough that both clients and lawyers should have no trouble understanding it. The contingent hourly-percentage fee is payable only in the event of recovery¹⁷¹ and equals the sum of two components:

- (1) the lawyer's time charge for the hours devoted to the case; and
- (2) a percentage (x) of the amount by which the recovery (s)¹⁷² exceeds that time charge.

The first component pays the lawyer, in his role as laborer, for his time; it equals the hours worked (h) times the amount per hour (w)

¹⁶⁸ See Schwartz & Mitchell, *supra* note 10, at 1144 & n.33; Comment, *An Analysis of State Legislative Responses to the Medical Malpractice Crisis*, 1975 DUKE L.J. 1417, 1444-45.

¹⁶⁹ Lowering the percentage rate of the contingent percentage fee increases the lawyer-client conflict as to hours worked—i.e., it decreases the value of h_t . See Appendix B.

¹⁷⁰ See *Special Project*, *supra* note 3, at 718 & n.224. Cf. Reder, *Medical Malpractice: An Economist's View*, 1976 AM. B. FOUNDATION RESEARCH J. 511, 548, 552 (limiting lawyers' earnings in malpractice litigation would drive prosperous attorneys into other fields and reduce lawyers' investments in such suits); Schwartz & Mitchell, *supra* note 10, at 1144-45 (effect of rate ceiling depends on its scope and level at which it is set).

¹⁷¹ Furthermore, the client is not responsible for the deficiency if the computed fee exceeds recovery. See note 37 *supra*.

¹⁷² In general, "recovery" here means the gross recovery minus any expenses of litigation chargeable to the client. See text accompanying note 64 *supra*.

that the lawyer could have earned by working on other matters.¹⁷³ The second component pays the lawyer, in his role as insurer, for those inevitable cases that prove unsuccessful; it equals x times the difference s minus wh . The proposed fee is thus expressible as $wh + x(s - wh)$.¹⁷⁴ Since it is the sum of two components, it is more complex than either of the two present fee systems. Nevertheless, each of the two components is quite simple and readily explainable. Indeed, by separating into two components the distinct payments for the contingent lawyer's two functions as laborer and insurer, the proposed fee may facilitate true comprehension.

Second, fixing the actual numbers to plug into the proposed fee's formula would not be difficult. For each case the lawyer could readily determine the number of hours worked, h , and the recovery, s . Each lawyer would have to fix his hourly wage, w , but this is a task lawyers have always managed. The size of the percentage, x , would pose a greater, but not insurmountable, problem. Setting x does not demand precision, because the contingent hourly-percentage fee aligns the economic interests of lawyer and client for any positive value of x under 100%.¹⁷⁵ Conceivably, the regulatory authorities could set x , or a ceiling on x , at some fixed value for all cases.¹⁷⁶ In so doing, they would presumably act in accordance with some external goal, such as (1) maintenance of lawyers' current income or (2) creation of lawyers' indifference between the proposed fee and the certain hourly fee.¹⁷⁷ Using crude assump-

¹⁷³ If the lawyer has idle time, w should be set equal to the lawyer's minimally acceptable hourly wage. See text accompanying notes 51-61 *supra*.

¹⁷⁴ If a number of lawyers have worked together on the case, the two wh terms each become the sum of the time charges of those lawyers. See note 66 *supra*.

¹⁷⁵ For a proof, see Appendix C.

¹⁷⁶ Upon application, the court might recognize exceptions on a case-by-case basis. See, e.g., N.Y. APP. DIV. R. 603.7(e)(4) (1st Dep't). Also, it may be desirable to set x specially for distinguishable classes of cases, such as those in the more risky medical malpractice field. See note 76 *supra*.

¹⁷⁷ These two goals are in fact different. Currently, personal-injury lawyers prefer the contingent percentage fee over the certain hourly fee to such an extent that the former is almost the exclusive method of financing such litigation. See notes 2 & 4 *supra*. This suggests that the personal-injury lawyer's average hourly earnings under the contingent percentage fee exceed his certain hourly wage, even when the lawyer takes into account those contingent cases where there is little or no fee. See F. MACINNON, *supra* note 1, at 70; Comment, *supra* note 4, at 345. Cf. HEW REPORT, *supra* note 2, at 33 (medical malpractice); Dietz, Baird, & Berul, *supra* note 2, at 114-16 (same). Although empirical data here are scanty, it appears that a ball-park estimate of the ratio (k) of the personal-injury lawyer's average hourly earnings under the contingent percentage fee to his certain hourly wage would be 1.15. See Comment, *supra* note 4, at 345 (25% premium in cases won); note 76 *supra* (recovery in 90% of cases). Cf. HEW REPORT, *supra* note 2, at 33 (medical malprac-

tions and rough data, x should be set at approximately 10% if the goal is to maintain lawyers' income as the proposed fee replaces the contingent percentage fee.¹⁷⁸ Using similarly crude assumptions and rough data, x should be set at approximately 5% if the goal is to make lawyers indifferent as to the choice between the proposed fee and the certain hourly fee, and thus to enhance clients' freedom of choice with respect to fee.¹⁷⁹ As experience under the new fee accumulates, the regulators could adjust x to a finer tuning. Alternatively, lawyer-client negotiation could set x in each case, subject to the general restriction of reasonableness.¹⁸⁰ This approach has a number of virtues. Negotiation on a case-by-case basis would allow observation of the proposed fee in practice; if a need for regulation became apparent, the authorities could then proceed on a sound experiential basis. Freedom of contract would also permit experimentation with variations on the proposed fee,¹⁸¹ thus facilitating additional reform. Moreover, freedom to negotiate would at least permit¹⁸² variation in x as a function of the indi-

tice); Dietz, Baird, & Berul, *supra* note 2, at 114-16 (same). Accordingly, if the goal were to maintain lawyers' income as we shift from the contingent percentage fee to the proposed fee, x would have to be fixed higher than it would if the goal were to induce lawyers' indifference between the proposed fee and the certain hourly fee. Maintaining lawyers' income requires that the proposed fee be as financially attractive to lawyers as the present contingent percentage fee. Inducing lawyers' indifference, on the other hand, calls for making the proposed fee only as financially attractive to lawyers as the present certain hourly fee.

Of course, fixing x or imposing a ceiling on x would permit only approaching the chosen goal, not reaching it. An inflexible x could roughly maintain lawyers' total current income, but some lawyers would be made better off and some worse off in the process. For example, a lawyer whose practice consists primarily of rapid settlement of lucrative personal-injury cases would become worse off under such a version of the proposed fee. Similarly, an inflexible x could induce only an overall indifference between the proposed fee and the certain hourly fee, because in any particular case one or the other fee might look better to the particular lawyer. For example, a small or questionable case would be more attractive to the lawyer under the certain hourly fee than under such a version of the proposed fee. See also notes 207-16 and accompanying text *infra*.

¹⁷⁸ Given this goal, the formula for x is $(k - p) / [(k/r) - p]$, where p is the fraction of contingent fee cases in which there is a recovery, r is the average percentage rate now charged under the contingent percentage fee, and k has the definition given in note 177 *supra*. In Appendix H we derive this formula and state the assumptions on which it rests. If $p = .9$ (see note 76 *supra*), $r = .33$ (see note 3 *supra*), and $k = 1.15$ (see note 177 *supra*), then $x = 9.8\%$.

¹⁷⁹ Given this goal, the formula for x is $(1 - p) / [(k/r) - p]$. In Appendix H we derive this formula and state the assumptions on which it rests. If we take p , r , and k at the values stated in note 178 *supra*, then $x = 3.9\%$.

¹⁸⁰ See text accompanying note 166 *supra*.

¹⁸¹ See note 218 *infra*.

¹⁸² However, it is unlikely that negotiation will induce much variation in x . Under the

vidual case's value.¹⁸³

Third, although the exacting and explicit formulation of the proposed fee is innovative, the fee does not differ drastically in thrust and effect from actual practice today. Under both the certain hourly fee and the contingent percentage fee, lawyers commonly make retrospective adjustments in light of results obtained and work entailed,¹⁸⁴ often leaving themselves in a position similar to that of a lawyer operating under the proposed fee. This fact should reduce rational and forthright resistance by lawyers to the new fee.

Fourth, lawyers, bar associations, or courts could normally implement the proposed fee without the need for legislation or other political action.¹⁸⁵ Moreover, the powers that be would not have to

contingent percentage fee, little room for real negotiation currently exists. A standard percentage rate tends to be applied, with little or no variation in the light of case value or the quality of the lawyer involved. *See* F. MACKINNON, *supra* note 1, at 186-87; D. ROSENTHAL, *supra* note 2, at 65. *But see* H. SHAIN, *LEGAL FIRST AID* 170 (1975). Although the attorney frequently charges less than the contract percentage after the case has been resolved (*see* note 7 *supra*), the contract percentage itself tends to be standard. However, there are hopes for greater competitive forces in the future, as the number of lawyers increases and the effects of price fixing and restrictions on advertising decrease. *See* Grady, *supra* note 5, at 52-53.

¹⁸³ We feel x should vary with the characteristics of the individual case for a number of reasons. Fixing x or imposing a ceiling on x will have economically disruptive effects. *Cf.* text accompanying notes 167-70 *supra*. It makes economic sense to allow an increase in x so that a potential client may induce a lawyer to take on a case of low value, as well as to encourage a decrease in x so that a client may rightly realize the rewards of a case of high value. *Cf.* Grady, *supra* note 5, at 25 (size of percentage should depend on amount of work involved and size of judgment or settlement); Schwartz & Mitchell, *supra* note 10, at 1139-40 ("Under competitive conditions the same percentage fee would not be charged for both [high-value and low-value cases]."). Moreover, fixing x , or likely even imposing a ceiling on x , will result in certain plaintiffs' paying more than their appropriate "insurance premium" for contingency (the second component of the proposed fee), and thereby subsidizing plaintiffs with less valuable cases. Nothing recommends such an arbitrary subsidization scheme. A much fairer scheme would let each plaintiff pay his own way by varying x , or would turn to a system of subsidization funded by a broader segment of society.

If x is to vary, how should it be set in a particular case? Again, the answer turns in part on the goal chosen—*e.g.*, maintenance of the effective hourly income currently obtainable under the contingent percentage fee, or equalization of the effective hourly income under the proposed fee and under the certain hourly fee. Aside from goal considerations, the value of x should turn on (1) the plaintiff's probability of recovery, (2) the expected size of the plaintiff's recovery, if any, and (3) the expected costs of seeking recovery. We derive a formula for computing x in Appendix H; that formula shows how the above-mentioned factors should influence the value of x .

¹⁸⁴ *See* notes 6 & 7 *supra*.

¹⁸⁵ *See* note 3 *supra*. Lawyers could immediately implement the proposed fee through lawyer-client contract. But perhaps introduction of the proposed fee would be easiest in a retrospective judicial award of attorneys' fees. Such awards occur in a variety of situations,

undergo a major conversion in fee philosophy, since the proposed fee introduces no new notions but simply recombines several old ones. Finally, we merely suggest that the proposed fee should generally supplant the contingent percentage fee, leaving the certain hourly fee as a client's option.¹⁸⁶ The proposal's net effect would thus be a move away from the contingent percentage fee, which has never enjoyed great favor in the eyes of the established bar.¹⁸⁷ All this adds up to a feasible and acceptable reform.

C. Possible Side Effects

Implementation of the proposed fee would entail changing one of the most basic rules of the game: the scheme for compensating lawyers. A change so fundamental risks side effects so great as to give any would-be reformer pause. "The undiscover'd country . . . makes us rather bear those ills we have, Than fly to others that we know not of."¹⁸⁸

Yet we muster some courage from the thoughts expressed above: The proposed fee merely recombines the characteristics of the two present fee systems; indeed, it looks much like what already occurs informally in practice. Implementation of the proposed fee is therefore unlikely to have any revolutionary side effects. The following analysis and accompanying Appendices reinforce this intuition with some foresight.

We now consider the question of what side effects our legal system will undergo if the contingent hourly-percentage fee replaces the contingent percentage fee. We shall treat those side effects in three Subsections. First, we shall examine changes in the quality of cases that lawyers would be willing to take on. Second, we

such as class actions. See F. MACKINNON, *supra* note 1, at 23; Berger, *Court Awarded Attorneys' Fees: What Is "Reasonable"?*, 126 U. PA. L. REV. 281 (1977); Dawson, *Lawyers and Involuntary Clients in Public Interest Litigation*, 88 HARV. L. REV. 849 (1975); *Developments in the Law—Class Actions*, 89 HARV. L. REV. 1318, 1606-18 (1976). The courts here already accord heavy weight to the factors of hourly rate, hours worked, recovery, and risk. See, e.g., *Lindy Bros. Builders, Inc. v. American Radiator & Standard Sanitary Corp.*, 487 F.2d 161, 166-69 (3d Cir. 1973), *enforced*, 540 F.2d 102 (3d Cir. 1976). The proposed fee would provide a ready formula for calculating a reasonable fee in many of the situations that call for a retrospective judicial award.

¹⁸⁶ See note 235 and accompanying text *infra*.

¹⁸⁷ See Radin, *supra* note 91, at 587; Youngwood, *supra* note 91, at 333-34; note 3 *supra*. Cf. F. MACKINNON, *supra* note 1, at 135-36 ("[T]he section of the bar which receives the highest average income and a disproportionately large share of the total income is concerned little, if at all, with specialties characterized by the contingent fee.").

¹⁸⁸ W. SHAKESPEARE, *HAMLET* act III, sc. 1, lines 79-82.

shall consider changes in the mode of disposing of those cases—*i.e.*, changes in the settlement rate. Third, we shall briefly explore changes in the allocation of wealth resulting from the disposition of those cases—*i.e.*, what changes in economic position the parties and counsel could expect as the proposed fee replaces the contingent percentage fee.

Even with much more sophisticated analytical tools than ours, we could not predict the impact of the proposed fee with certainty. Nevertheless, we submit these two tentative conclusions: (1) none of the expected side effects is earthshaking, and (2) none of the expected side effects argues against implementing the proposed fee—some may even supply additional arguments for its implementation.

1. *Effect on Case Mix*

Not all prospective cases are economically acceptable to a lawyer whose fee is wholly or partly dependent on the size of the recovery. While large, meritorious cases are clearly attractive, and small, dubious cases clearly unattractive, many cases do not fit into either of these two categories. The lawyer may reject some meritorious cases because they are too small, and may accept some dubious cases because they are sufficiently large. His decision to reject or accept such cases depends in part on the fee arrangement.

The first step in any analysis is to define terms. In this context, the words "meritorious" and "dubious" refer to the lawyer's estimate of the probability (P) that the plaintiff will recover some amount greater than zero, whether by settlement or by judgment. The words "large" and "small" are more complex in meaning. They refer to the relation between the expected size of the plaintiff's recovery, if any, and the expected costs of seeking recovery. We can give the terms "large" and "small" quantitative meaning through a payoff ratio (q), defined as the conditional expected value of the recovery given a positive recovery, divided by the opportunity cost of the total time that the lawyer expects to devote to the case.

We can assume that a lawyer will reject those cases where his expected fee is less than his expected opportunity cost, and accept all others.¹⁸⁹ The excess of expected fee over expected opportu-

¹⁸⁹ This assumption may overstate somewhat the category of cases accepted, especially

nity cost—that is, the lawyer's expected profit—depends on his percentage rate and on the values of P and q for the particular case.¹⁹⁰ Specifically, the lawyer's expected profit decreases as P or q decreases. The lawyer could offset this effect by increasing his percentage rate, thereby making many cases economically acceptable. However, if the percentage has an upward limit imposed by law or custom,¹⁹¹ the lawyer may not be able to raise his percentage rate high enough to make a case with a low P or q economically acceptable.

This suggests a mode of analysis for determining which cases would be economically acceptable under any particular percentage fee. If we hypothesize some ceiling on the applicable percentage, we can specify in terms of P and q which cases the lawyer would accept and which he would reject under the particular fee. This in turn permits us to compare the case mix under the contingent percentage fee and the contingent hourly-percentage fee.¹⁹²

To illustrate, set x in the proposed fee at 15%, a ceiling that regulatory authorities might impose.¹⁹³ For purposes of comparison, set r in the contingent percentage fee at 33⅓%, the value that most commonly prevails.¹⁹⁴ If we plot P against q , we can draw a curve for each fee, as in Figure 6. The solid curve represents the acceptability boundary for the proposed fee; the broken curve serves the same purpose for the contingent percentage fee. Cases that fall below the relevant curve would appear economically unacceptable, and the lawyer would reject them. He would accept cases above the relevant curve.

Figure 6 shows that some cases, those in region A, would be unacceptable under both fees. Most of these are small, dubious cases. The lawyer would accept other cases, those in region D, under both fees. Most of these are large, meritorious cases. Region B, however, represents cases that the lawyer would reject under the

under the proposed fee, since the lawyer may also require the recovery to exceed his fee by some significant margin. However, this incentive to avoid serious client dissatisfaction is irrelevant to our immediate analytical concern with direct economic incentives. In any event, this incentive cannot be quantified. Moreover, under the proposed fee, client dissatisfaction could be avoided or minimized by the client education mentioned in note 164 *supra*.

¹⁹⁰ The exact relationship is developed in Appendix I.

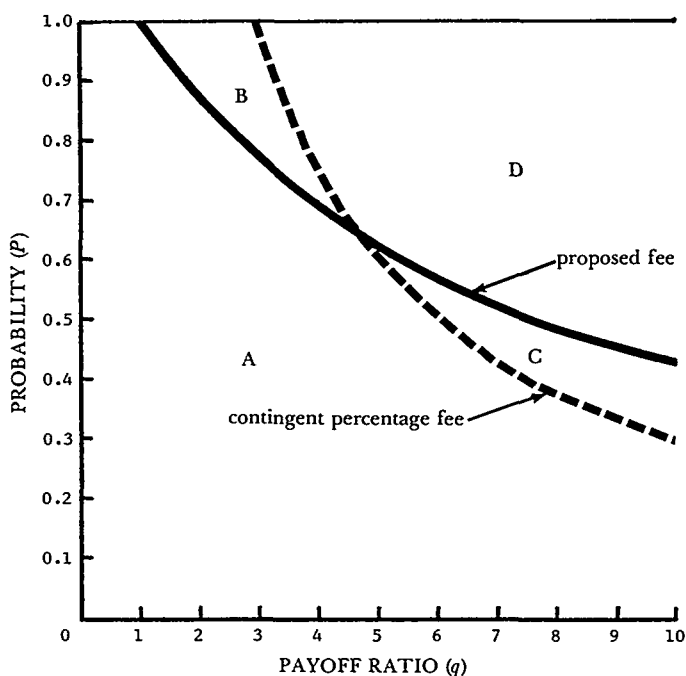
¹⁹¹ See note 3 *supra*. Cf. note 120 *supra*.

¹⁹² We make this comparison in Appendix I, and use the formulas derived there to create Figure 6.

¹⁹³ See generally text accompanying notes 176-77 *supra*.

¹⁹⁴ See note 3 *supra*.

FIGURE 6
Acceptability Boundaries



contingent percentage fee but accept under the proposed fee. These are meritorious (high P) cases that are too small (low q) to be economically acceptable to the lawyer under the contingent percentage fee. Under the proposed fee, bringing this kind of case would become feasible. Finally, region C represents cases that the lawyer would accept under the contingent percentage fee but reject under the proposed fee. These are dubious (low P) cases that are sufficiently large (high q) to be economically acceptable to the lawyer under the contingent percentage fee. The proposed fee would deter this kind of case.¹⁹⁵

In sum, replacing the contingent percentage fee with the proposed fee would encourage the bringing of smaller, meritorious cases and discourage the bringing of larger, dubious cases. This, we submit, is on balance a desirable side effect.¹⁹⁶

¹⁹⁵ In Figure 6 the two curves cross each other, thereby creating regions B and C. This does not depend on the particular values of x and r used in Figure 6. Appendix I shows that the curves will always cross in the manner depicted, and that regions B and C will always exist. Changing x and r affects only the sizes and shapes of those regions.

¹⁹⁶ The predicted effect is curiously similar to what would happen if the English rule

2. *Effect on Settlement Rate*

At present, the vast majority of personal-injury cases end in settlement before trial.¹⁹⁷ Consequently, a small change in that pre-trial settlement rate would have a significant impact on the number of cases going to trial.¹⁹⁸ Similarly, a change in the overall rate of settlement before judgment could have huge social costs. Since the fee arrangement determines the allocation of the recovery between the plaintiff and his lawyer, changing the fee arrangement might affect the overall settlement rate. We shall now examine this possible side effect.

The threshold conditions under which a given settlement offer will appear minimally acceptable to the plaintiff or to his lawyer, which we discussed earlier,¹⁹⁹ represent the plaintiff's and his lawyer's lower bounds on the range of offers that could conceivably result in settlement. We can apply a similar analysis to the economic interests of the defendant²⁰⁰ in order to derive an upper bound on the range of offers that he would conceivably make. Settlement is possible only if the defendant's upper bound lies at or above the governing lower bound on the plaintiff's side. Indeed, the difference between the upper and lower bounds provides a rough measure of the likelihood of settlement under any particular fee—the bigger the difference the more likely is settlement.²⁰¹ This measure permits us to compare the settlement rates under the contingent percentage fee and the contingent hourly-percentage fee.²⁰²

The conclusions resulting from this analysis depend on whether the settlement decision on the plaintiff's side is made in the best interests of the plaintiff or in the best interests of his lawyer. If the plaintiff's best interests control, replacing the contingent percentage fee with the proposed fee would encourage settlement

requiring reimbursement of attorneys' fees were implemented. See Posner, *supra* note 19, at 437-39.

¹⁹⁷ See note 76 *supra*. One study estimates that 95% of all personal-injury cases in which the plaintiff engages a lawyer are settled before trial, 3% are settled during trial, and 2% go to judgment. See *Columbia Study*, *supra* note 2, at 10-11.

¹⁹⁸ For example, suppose the pretrial settlement rate is 95%, which leaves 5% of all cases going to trial. If that settlement rate drops to 94%, a decrease of about 1%, the resulting increase in the number of cases going to trial is 20%. But cf. note 205 *infra*.

¹⁹⁹ See note 80 *supra*.

²⁰⁰ See note 312 *infra*.

²⁰¹ See note 313 *infra*; Note, *Contingent Fees for Expert Witnesses in Civil Litigation*, 86 YALE L.J. 1680, 1705-06 (1977).

²⁰² For the details of this comparison, see Appendix J. We state only the naked conclusions in the text.

when the offer comes early in the case's life or when the plaintiff's subjective estimate²⁰³ of the probability of winning a judgment is high, and would discourage settlement otherwise. If instead the best interests of the plaintiff's lawyer control, replacing the contingent percentage fee with the proposed fee would encourage settlement when the offer comes late in the case's life or when the plaintiff's subjective estimate of the probability of winning a judgment is low, and would discourage settlement otherwise. Thus, implementation of the proposed fee would tend to encourage early settlement by the plaintiff's lawyer who works in his client's best interests and to discourage early settlement by the lawyer who works in his own best interests.²⁰⁴

Various unknowns, including the degree to which the best interests of the plaintiff's lawyer dominate those of his client, make it difficult for us to go further in predicting the effect on settlement rate of the change from the contingent percentage fee to the proposed fee. But note that regardless of whose interests control, the typical case under the proposed fee will in the course of its life go through one phase where settlement is encouraged relative to the situation that would have prevailed under the contingent percentage fee; it will also go through one phase where settlement is relatively discouraged. We can therefore surmise that the overall effect on settlement rate of this change in fee arrangement would be neutral.²⁰⁵ At any rate, there is no indication that any potential side effect here need give the would-be reformer pause.²⁰⁶

²⁰³ See notes 265 & 317 *infra*.

²⁰⁴ An incidental benefit here is that the proposed fee, by discouraging early settlement and encouraging late settlement where the lawyer's best interests control, would modulate the implicit conflict of interest. The potential for harm to the interests of the plaintiff is probably greatest in the early stages, when some lawyers accept a settlement offer that is low compared with the judgment they could obtain, but high compared with the opportunity cost of the small number of hours expended.

²⁰⁵ Our resolve to tolerate the possibility of a slight effect on settlement rate is strengthened by the thought that we cannot really know whether an increase or a decrease in the rate is desirable. One is apt to assume that the settlement rate should always be increased, in order to reduce the direct costs of dispute resolution. But one must also consider error costs—*i.e.*, the social costs entailed in mistaken imposition of liability or mistaken failure to impose liability. As the settlement rate approaches 100%, which it does in the personal-injury field, error costs start mounting. If the settlement rate is high enough, further increases in the rate will reduce the efficiency of the legal system. No one knows whether personal-injury cases have passed that optimal settlement rate. See Posner, *supra* note 19, at 400-01, 429.

²⁰⁶ John Prather Brown, a former professor of economics at Cornell University, suggested another side effect concerning settlement that merits mention: Substitution of the

3. *Effect on Allocation of Wealth*

Unlike the contingent percentage fee, the size of the proposed fee rests in part on the number of hours worked by the plaintiff's lawyer. Accordingly, it depends only in part on the recovery, to the extent of the variable x . Nevertheless, manipulation of x can control the lawyer's income.²⁰⁷ Lawyers' current income could thus be maintained under the proposed fee, if this were deemed a legitimate goal.²⁰⁸

Implementation of the proposed fee would remove the incentive under the contingent percentage fee for lawyers to cease working too soon, and would thus very likely lead to an increase in the average number of hours worked by lawyers on each case.²⁰⁹ The total number of cases handled by lawyers would depend on the variable x . As we noted earlier,²¹⁰ if there were an upward limit on x , the number of small, meritorious cases would increase and the number of large, dubious cases would decrease, resulting in an undramatic effect on the total number of cases.²¹¹ Absent an upward limit on x , the number of large, dubious cases would not decrease because the lawyer could negotiate an x high enough to make many such cases economically acceptable to him; since that leaves only an increase in the number of small, meritorious

proposed fee for the contingent percentage fee may change the strategy of the defendant with respect to the size of his settlement offer. Although the upper bound on the range of offers that the defendant would conceivably make is independent of the plaintiff's fee arrangement, this does not imply that the size of the offer the defendant actually makes is also independent of that fee arrangement. If, under the plaintiff's fee arrangement, there is a range of offers acceptable to the plaintiff's lawyer but not to the plaintiff, the defendant might seek to make an offer within that range. As we show in Appendix E, such a range does in fact exist under both the contingent percentage fee and the proposed fee, but the range is generally smaller under the latter. Consequently, implementation of the proposed fee would reduce the opportunity for the defendant to exploit the economic conflict of interest between the plaintiff and his lawyer—a desirable side effect. Moreover, one could argue that, all else being equal, this change would further encourage settlement, since offers not aimed at dividing the plaintiff and his lawyer are more likely to be accepted.

²⁰⁷ See text accompanying notes 175-83 *supra*.

²⁰⁸ Any restrictions on varying x would leave some lawyers better off and some worse off; overall, however, lawyers' total current income could still be roughly maintained. See note 177 *supra*.

²⁰⁹ See text accompanying note 47 *supra*.

²¹⁰ See notes 189-96 and accompanying text *supra*.

²¹¹ This is admittedly a rough approximation, but a reasonable one. There are likely more potential small cases awaiting lawyers than large ones.

Paraphetically, a relative increase in small cases does not imply a decrease in average hours worked per case, because "small" is not defined solely in terms of hours worked but in terms of payoff ratio. See text accompanying note 189 *supra*.

cases,²¹² the net effect would then be an increase in the total number of cases. In sum, by increasing the average number of hours worked per case and holding the total number of cases at least constant, implementation of the proposed fee would increase the total number of hours worked by lawyers. This increased demand on lawyers' services would raise lawyers' income, not only in the arena where the contingent fee prevails but throughout the legal profession.²¹³

The increase in the number of hours worked by the lawyer on the average case would naturally cause an increase in the size of the average recovery.²¹⁴ Indeed, implementation of the proposed fee would maximize the average return, where "return" means recovery minus opportunity cost.²¹⁵ But whether the average client's net recovery would increase depends on the variable x , since x determines how the lawyer and the client are to divide the return. Setting x (either for all cases or through case-by-case negotiation) at any reasonable level—even at a level high enough to maintain lawyers' current income—would give the average client a higher net recovery than he would have received under the contingent percentage fee.²¹⁶ This accords with what one would expect upon the removal of the economic conflict of interest between lawyer and client.

With plaintiffs and their lawyers generally better off, someone must be financing this increased well-being. It is the defendants, of course. They would pay more in the form of larger recoveries, and possibly do so in more cases. Yet there is no indication that this would be a bad development. The proposed fee should be allowed to remove the economic conflict of interest and the related disruptive effects of the contingent percentage fee. These are the sources

²¹² See text accompanying note 161 *supra*.

²¹³ See Schwartz & Mitchell, *supra* note 10, at 1137-39.

²¹⁴ See notes 20-21 and accompanying text *supra*.

²¹⁵ Cf. note 26 *supra*.

²¹⁶ The proposed fee would maximize the average return. Assuming that lawyers do not work for less than their opportunity cost, setting x in general very close to 0% would cause the average client's net recovery to approach the maximum value attainable under any fee arrangement. But if x were set in general very close to 100%, the average client's net recovery would be approximately zero. Thus, whether the average client would be better or worse off under the proposed fee than under the contingent percentage fee depends on x . Appendix K shows that, even if x were set high enough to maintain lawyers' current income, the average client would still be better off under the proposed fee. Although Appendix K also shows that some clients would be somewhat worse off under the proposed fee because of the shape of their particular *s-curves*, clients' net recovery would increase overall.

of the bargains that defendants currently enjoy. There is no reason, based either in equity or in efficiency,²¹⁷ to allow continued availability of these bargains.

V

ALTERNATIVE REFORMS

Part IV showed the preferability and feasibility of the proposed contingent hourly-percentage fee, and demonstrated that the possible side effects consequent to its implementation are neither earthshaking nor undesirable. This leaves the possibility of alternative fee reforms as the only remaining argument against the proposed fee.²¹⁸

Several alternative reforms have been proposed, or even implemented in certain situations, in an attempt to solve the problems associated with the two present fee systems. Some of these reforms are unattractive for economic reasons, others for reasons of practicality.

The economically unattractive reforms include those schedules for contingent percentage fees under which the percentage rate decreases as the size of recovery increases.²¹⁹ For small re-

²¹⁷ See generally Posner, *supra* note 19, at 402-06.

²¹⁸ We limit our concern here to alternative reforms that are true substitutes for the proposed fee.

There are several major reforms, some highly desirable, that are not necessarily inconsistent with the proposed fee. These include expansion of legal aid, development of pre-paid legal services plans, and implementation of the English rule requiring reimbursement of attorneys' fees. See F. MACKINNON, *supra* note 1, at 141-52; Corboy, *supra* note 91, at 33-34; Epstein, *Medical Malpractice: The Case for Contract*, 1976 AM. B. FOUNDATION RESEARCH J. 87, 132-36.

There are also many minor reforms that could be implemented as refinements of the proposed fee. We certainly do not suggest here that the proposed fee is the optimal fee structure. Experience under the proposed fee would undoubtedly suggest further reforms, perhaps including: (1) making the variable x in the proposed fee decrease as the return ($s - wh$) increases (*cf.* note 219 and accompanying text *infra*), (2) equating the variable s in the proposed fee to recovery minus some floor amount which, in the particular circumstances, is considered certain to be recovered (*cf.* F. MACKINNON, *supra* note 1, at 65, 185-86 (discussing practice common in workmen's compensation cases of assessing fee percentage only against that portion of recovery above settlement offer already received)), (3) imposing on the client some greater share of litigation expenses in the event that the claim proves unsuccessful (*see* note 3 *supra*), (4) tightening ethical controls on undesirable behavior by the lawyer, including abuses in setting the fee (*see generally* text accompanying note 166 *supra*), and (5) expanding judicial supervision of fees (*see* Corboy, *supra* note 91, at 35-36; Special Subcomm. of Defense Research Comm., *supra* note 3, at 204-06, 209).

²¹⁹ The pioneer reformer here was the First Department of New York's Supreme Court, Appellate Division. N.Y. APP. DIV. R. 603.7(e) (1st Dep't) provides for a fee of 50%

coveries, the marginal percentage rate is higher than the normal rate of 33⅓%; for large recoveries, it is lower than the normal rate. This decreasing scale is a step toward solving two problems associated with the contingent percentage fee: the unavailability of counsel for small claims and the excessiveness of fees for big claims. Unfortunately, the cure is incomplete. Still missing is any attempt, such as inclusion of an hourly component, to account for the amount of work expended by the lawyer. The size of the fee under a decreasing scale remains essentially unrelated to the work entailed. Therefore, the fee still measures poorly the cost to the lawyer and the value to the client of the legal services rendered, preserving all the problems associated therewith.²²⁰ Also, in the vast majority of cases, the recovery is modest; this means that the fee under a decreasing scale, when expressed as a flat percentage of recovery, usually exceeds the 33⅓% rate prevailing under the normal contingent percentage fee.²²¹ The decreasing scale feature thus exaggerates all the problems of a percentage fee. Finally, a decreasing scale does nothing to solve or reduce the problem of economic conflict of interest between lawyer and client. The lawyer has no less incentive to accept an early settlement unfavorable to his client's best interests than he does under a fee computed on a fixed percentage.²²²

Consider next those schedules for contingent percentage fees under which the percentage rate increases as the litigation pro-

on the first \$1000 recovered, 40% on the next \$2000, 35% on the next \$22,000, and 25% on any recovery over \$25,000. Alternatively, the court rule provides that the lawyer and the client may agree to a straight fee of 33⅓% of the recovery, or in extraordinary circumstances the lawyer may apply to the court for relief from the decreasing scale. See F. MACKINNON, *supra* note 1, at 160-70, 183-84.

The decreasing scale has some support around the country; sometimes it is applied to all tort actions, as in N.J. GEN. CT. R. 1:21-7, other times only to some special class of cases like medical malpractice actions, as in CAL. BUS. & PROF. CODE § 6146 (West Supp. 1977). This reform also enjoys considerable popularity among those formulating proposals to deal with the medical malpractice crisis. See, e.g., HEW REPORT, *supra* note 2, at 34-35; MCGILL REPORT, *supra* note 3, at 65, 197.

²²⁰ Cf. text accompanying notes 160-65 *supra*.

²²¹ See *Columbia Study*, *supra* note 2, at 23-24. Cf. HEW REPORT, *supra* note 2, at 10-11 (medical malpractice). Under the decreasing scale promulgated by the First Department of New York's Supreme Court, Appellate Division (see note 219 *supra*), any recovery less than \$33,000 will result in a percentage fee greater than 33⅓% (see *id.*).

²²² That some reformers suggest an increasing scale, under which the percentage rate increases as the size of recovery increases, suggests the lack of magic in the idea of a decreasing scale. The rationale of this alternative innovation is that an increasing scale would better reward the lawyer for displays of exceptional professional ability. See Note, *supra* note 3, at 947-48. See generally Schwartz & Mitchell, *supra* note 10, at 1140.

gresses from stage to stage.²²³ The applicable percentage might be 25% if there is recovery before filing an action, 33⅓% after filing but before trial, 40% during or after trial but before appeal, or 50% during or after appeal. This ascending scale seems to alleviate certain problems associated with the contingent percentage fee. It provides some measure of the amount of work expended by the lawyer and reduces the lawyer's inclination to accept a premature settlement. But the cure is clumsy. A major difficulty is the ascending scale's discontinuity: One small step for the lawyer means one giant leap for his fee. Moreover, the stage of litigation does not necessarily correlate with the number of hours expended. Thus, by simply going through the formality of filing a complaint, the lawyer can make his fee jump from 25% to 33⅓%; by waiting until the start of trial to accept a settlement offer made on the eve of trial, he can make his fee jump to 40%.²²⁴ This cosmetic approach to reform preserves the problems engendered by a poor measure of the cost to the lawyer and the value to the client of the legal services rendered. Also, the fee under an ascending scale perpetuates all the problems of a percentage fee; to the extent that the applicable percentage exceeds 33⅓%, those problems intensify. Finally, an ascending scale still leaves the lawyer without a direct economic incentive to work the number of hours demanded by the client's best interests.

Another suggested reform is the contingent hourly fee.²²⁵ Under this system the lawyer receives his fee only in the event of recovery; to compensate himself for the risk of loss, he then collects an hourly wage set somewhat higher than his certain hourly wage. This reform avoids all the problems associated with a percentage fee, but replaces them with the problems of an hourly fee. In particular, it remains an imperfect measure of the value of the legal services rendered. Also, a contingent hourly fee fails to align the economic interests of lawyer and client. On the one hand, if the

²²³ An example is § 4 of the Federal Tort Claims Act, 28 U.S.C. § 2678 (1970), which generally limits the fee to 20% of any settlement or to 25% of any judgment. Similar ascending schedules, often with three or four percentage gradations, are frequently provided for by lawyer-client contract. See F. MACKINNON, *supra* note 1, at 170, 184-85; Note, *supra* note 3, at 948. Cf. Dietz, Baird, & Berul, *supra* note 2, at 114-15 (survey of lawyers' fee arrangements in medical malpractice cases).

²²⁴ See F. MACKINNON, *supra* note 1, at 185, 198. Cf. notes 232-34 and accompanying text *infra*.

²²⁵ See, e.g., Schwartz & Mitchell, *supra* note 10, at 1154. Cf. *In re Gypsum Cases*, 386 F. Supp. 959 (N.D. Cal. 1974) (retrospective judicial award of attorneys' fees calculated on hourly rate multiplied by risk factor).

lawyer sets his contingent hourly wage precisely to compensate for the risk of loss, he will theoretically be indifferent as to the number of hours worked. As we have already seen,²²⁶ however, indifference exists only in the dreamworld of an economic model; it degenerates into misalignment in the real world. Certainly, the lawyer will have no direct economic incentive to devote the number of hours that would maximize his client's net recovery. On the other hand, if the lawyer sets his contingent hourly wage too high, he will have a direct economic incentive to overwork; if he sets it too low, he will be inclined to underwork to the point of refusing the case. Accordingly, in order to avoid severe misalignment, a precise calculation of the risk involved in the particular case must precede the setting of the contingent hourly wage. Such precision is simply impossible. We can safely conclude, therefore, that a contingent hourly fee results in economic conflict of interest between lawyer and client.

In sum, all three of these reforms are unsatisfactory, primarily for economic reasons. We shall now examine three reforms in the second category—those that fail primarily for want of practicality.

One suggested reform would allow the potential plaintiff to sell his claim to a lawyer or some other collection agent.²²⁷ This circumvents all the problems discussed in this Article, but it presents some very serious practical problems. First, this proposal would require a major change in the attitudes of our legal system toward champerty and the nonassignability of causes of action, and in the laws based on those attitudes.²²⁸ Second, although a truly competitive claim-buying market would theoretically eliminate the need for the potential plaintiff to evaluate his claim, such a market is unlikely to develop. The unique nature of the product being sold would erect innumerable obstacles, such as the waste entailed in costly, independent investigations of each claim by the buyers. Third, absent a truly competitive market, the typical potential plaintiff would have to hire his own lawyer to assist in evaluating and selling the claim. This of course would reintroduce all the problems discussed in this Article.

A related suggestion would revamp the loan market so as to

²²⁶ See text accompanying notes 56-57 *supra*.

²²⁷ See, e.g., Schwartz & Mitchell, *supra* note 10, at 1154. Cf. *Person v. Association of the Bar*, 414 F. Supp. 139 (E.D.N.Y. 1976) (sale of "shares" in claim), discussed in 63 A.B.A.J. 166 (1977).

²²⁸ See generally F. MacKINNON, *supra* note 1, at 35-41.

facilitate the client's borrowing against his claim.²²⁹ The lender would extend a line of credit to the client, making funds available as needed to pay the lawyer on a certain hourly basis. The client would repay the loan only in the event of recovery. An above-normal interest rate would compensate the lender for the risk of loss. This contingent loan idea skirts many of the problems of the present fee systems, but abounds in practical problems. First, the proposal would run into the attitudinal and legal impediments embodied in the concepts of champerty and maintenance.²³⁰ Second, the unique nature of the collateral would make attaining the premised ideal loan market unlikely. Third, the lender would probably be the lawyer himself, since he would be in the best position to evaluate the claim and to extend the loan. If he were the lender, the lawyer-client relationship would be equivalent to that under a contingent hourly fee.²³¹ If someone other than the lawyer were the lender, the lawyer-client relationship would be similar to that under a certain hourly fee. In either case, this proposal would perpetuate all the problems of an hourly fee and would fail to solve the problem of economic conflict of interest between lawyer and client.

One last possible reform is a schedule for contingent percentage fees under which the percentage rate would increase proportionately with the number of hours worked.²³² With each hour the percentage rate would grow in accordance with some constant (K); thus, r would equal Kh . For a particular s -curve, the value of K could be set so as to align the economic interests of lawyer and client.²³³ This reform, a refinement of the above-described ascending scale,²³⁴ fails for practical reasons. Only one value of K would successfully align the lawyer's and the client's economic interests,

²²⁹ See, e.g., Schwartz & Mitchell, *supra* note 10, at 1154.

²³⁰ See generally F. MacKinnon, *supra* note 1, at 35-41.

²³¹ Under the contingent hourly fee, the lawyer in effect lends the client the value of his time. In the event of recovery, this loan is repaid, with "interest" in the form of an above-normal hourly rate; in the event of loss, the lawyer forfeits the amount lent. This is indistinguishable from a contingent loan at an above-normal interest rate extended by a lawyer to pay for his own services on a certain hourly basis.

²³² This reform has not been proposed elsewhere, but it is a natural postscript to the ascending scale described in the text accompanying note 223 *supra*.

²³³ Alignment could be achieved if K were set so that df/dh falls to a value of w at the precise number of hours where $ds/dh = w$.

²³⁴ See text accompanying note 223 *supra*. This reform differs from the ascending scale in that (1) the percentage rate increases with the number of hours worked rather than with the stage of litigation, and (2) the relationship is smooth rather than discontinuous.

and this value of K would be different for each case. In short, this proposal would require a totally unrealistic amount of information concerning the particular *s-curve* of each case.

Indeed, this last proposal typifies the theoretically infinite number of schemes that would align the economic interests involved. These schemes have one feature in common: As the economic problems dissolve, practicality disappears. The proposed contingent hourly-percentage fee emerges as a seemingly unique combination of economic attractiveness and practical desirability.

CONCLUSION

A new type of legal fee for pursuing damage claims should be instituted. This proposed fee would be payable only in the event of recovery and would be computed by adding (1) the lawyer's time charge for the hours worked to (2) a small percentage (say 5% or 10%) of the amount by which the recovery exceeds that time charge.

This contingent hourly-percentage fee largely solves the problem of economic conflict of interest between lawyer and client, a problem that exists under both the certain hourly fee and the contingent percentage fee. It also solves or minimizes many of the other problems associated with these two basic fee systems. Because of its contingency, the proposed fee facilitates access by the poor to legal services. Moreover, it measures well the cost to the lawyer and the value to the client of the legal services rendered—certainly better than does either a pure hourly fee or a pure percentage fee. Thus, for example, replacing the contingent percentage fee with the proposed fee would encourage the bringing of small, meritorious cases and would eliminate the exorbitant profit that lawyers now reap from certain cases.

Beyond its general preferability, the proposed fee's practicality makes implementation feasible. Moreover, the possible side effects consequent to its implementation are neither earthshaking nor undesirable. Indeed, when compared to alternative reforms, the contingent hourly-percentage fee appears uniquely sound and practical.

A proposal to implement a new type of fee does not necessarily imply that the old should be abolished. The certain hourly fee should surely continue as a client's option. First, the client should be free to decide whether or not he wants the contingency feature; there is no reason to force the client to buy insurance. Second, in particular situations the client would fare better under a pure

hourly fee than under the proposed fee.²³⁵ Third, in vast realms of legal practice the certain hourly fee is workable but the proposed fee would not be.²³⁶ Fourth, the abuses that exist under the certain hourly fee are generally neither egregious nor scandalous.

The contingent percentage fee stands in a very different position relative to the proposed fee. The perfectly knowledgeable client would only rarely prefer the contingent percentage fee,²³⁷ and the risk of abuse under it is real and great. In view of these twin considerations, the contingent percentage fee should be abolished. At the very least, it should bear a heavy presumption of impropriety, perhaps being permitted only after the lawyer obtains specific judicial approval.

Lawyers, bar associations, and courts should therefore begin experimentation in fee reform, with the ultimate aim of replacing the contingent percentage fee with the proposed contingent hourly-percentage fee.

²³⁵ For example, a knowledgeable client would prefer a certain hourly fee in a case involving clear liability, substantial and fixed damages, and little legal work.

²³⁶ Any kind of "office work," such as drafting a will, serves as an example. *See also* F. MacKinnon, *supra* note 1, at 45-53 (discussing three areas of legal practice where contingent fee generally prohibited); 1 S. Speiser, *ATTORNEYS' FEES* §§ 2:4-8 (1973).

²³⁷ As Appendix K shows, some clients might receive a slightly larger net recovery under the contingent percentage fee than under the proposed fee, but to predict this the client would require an unrealistic amount of information concerning the *s-curve* of his case.

Also, as Figure 6 shows, there might be some large, dubious cases that a lawyer would accept under the contingent percentage fee but not under the proposed fee. Regulatory authorities could cure this by allowing α to increase; the client could solve the problem by seeking out a lawyer with a lower w . However, it may be that this kind of case should not be encouraged.

APPENDICES

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APPENDIX A

THE CERTAIN HOURLY FEE UNDER THE ECONOMIC MODEL

Because the size of the certain hourly fee varies directly with the number of hours that the lawyer devotes to the case, it can be expressed as

$$f_h(h) = wh$$

where w is the lawyer's hourly wage rate, h is the number of hours, $f_h(h)$ denotes the fee function, and the subscript h denotes the certain hourly feature. The client's net recovery after paying such a fee is the difference between the settlement and the fee. Thus,

$$\begin{aligned} C(h) &= s(h) - f_h(h) \\ &= s(h) - wh \end{aligned}$$

where $C(h)$ and $s(h)$ are the net recovery and settlement functions. We can now find the value of h that will maximize the client's net recovery by taking the time derivative²³⁸ of $C(h)$:

$$\begin{aligned} C'(h) &= s'(h) - f'_h(h) \\ &= s'(h) - w. \end{aligned}$$

The maximum value of $C(h)$ occurs at the number of hours h^* where $C'(h) = 0$,²³⁹ that is, where

$$s'(h) = w.$$

²³⁸ The notation $C'(h)$ represents the first time derivative, $dC(h)/dh$. Similarly, the notation $C''(h)$ will represent the second time derivative, $d^2C(h)/dh^2$.

²³⁹ To conclude that $C(h)$ reaches its maximum at h^* , we must show not only that

Since $f'_h(h) = w$, $f'_h(h) = s'(h)$. Finally, since $f'_h(h)$ and $s'(h)$ represent the slopes of the f_h -line and the s -curve's tangent, the client's net recovery reaches its maximum at the point h^* where the tangent to the s -curve becomes parallel to the f_h -line.²⁴⁰

APPENDIX B

THE CONTINGENT PERCENTAGE FEE UNDER THE ECONOMIC MODEL

Because the size of the contingent percentage fee is proportional to the size of the settlement, it can be expressed as

$$f_{\%}(h) = rs(h)$$

where r is the lawyer's percentage rate, $f_{\%}(h)$ and $s(h)$ denote the fee and settlement functions, and the subscript % denotes the contingent percentage feature. The client's net recovery after paying such a fee is

$$\begin{aligned} C(h) &= s(h) - f_{\%}(h) \\ &= s(h) - rs(h) \end{aligned}$$

where $C(h)$ and $s(h)$ represent the net recovery and settlement functions. Taking the time derivative, we get

$$\begin{aligned} C'(h) &= s'(h) - f'_{\%}(h) \\ &= s'(h) - rs'(h). \end{aligned}$$

The maximum value of $C(h)$ occurs at the number of hours h_c where $C'(h) = 0$,²⁴¹ that is, where

$$s'(h) = rs'(h).$$

Since $f'_{\%}(h) = rs'(h)$, the client's net recovery reaches its maximum at the point h_c where the tangents to the s -curve and the $f_{\%}$ -curve become parallel.²⁴² Interestingly,

$C'(h^*) = 0$, but also that $C''(h^*) < 0$. We can show the latter in four steps. First, since $C'(h) = s'(h) - w$, it follows that $C''(h) = s''(h)$. Second, recall the assumptions we made about $s(h)$: (1) the lawyer must initially work a certain minimum number of hours, say h_a , before $s(h)$ can take on a positive value, and (2) after the lawyer works h_a hours, $s(h)$ increases by decreasing increments until it levels off to a maximum value at some point $h_b > h_a$. See notes 20-21 and accompanying text *supra*. It follows from these assumptions that $s'(h)$ is a decreasing function of h in the interval (h_a, h_b) , with $s'(h_a) > 0$ and $s'(h_b) = 0$. Therefore, $s''(h) < 0$ in the range $h_a < h < h_b$. Third, since the lawyer will always work more than the minimum number of hours required to produce a positive settlement, $h_a < h^*$. Finally, since $s'(h^*) = w$, $s'(h_b) = 0$, and $w > 0$, it follows that $h^* < h_b$. Therefore, h^* must lie within the range of h values where $s''(h) < 0$. This means that $C''(h^*) < 0$. We can therefore conclude that $C(h)$ reaches its maximum when $C'(h) = 0$.

²⁴⁰ See Figure 2 *supra*.

²⁴¹ Again, we must show not only that $C'(h) = 0$ at h_c , but that $C''(h) < 0$ there as well. Since $C'(h) = s'(h) - rs'(h)$ and $r < 1$, $C'(h) = 0$ only when $s'(h) = 0$. Additionally, at the point where $s'(h)$ becomes zero, $s''(h) < 0$. See note 239 *supra*. Since $C''(h) = (1 - r)s''(h)$ and $r < 1$, $C''(h) < 0$ whenever $s''(h) < 0$. Therefore, $C(h)$ reaches its maximum when $C'(h) = 0$.

²⁴² See Figure 3 *supra*.

this point does not occur until both curves have reached their respective maxima: Since $r > 0$, $s'(h)$ will equal $rs'(h)$ if and only if $s'(h) = 0$. But under the assumptions of the economic model, $s'(h)$ does not become zero until the s -curve levels off at its maximum value.²⁴³ Therefore, at h_C the settlement, the lawyer's total fee, and the client's net recovery simultaneously reach their maximum values. Since $s(h)$ will remain constant beyond that point, so will $f_{\%}(h)$ and $C(h)$.

Consider now the lawyer's profit, which is the difference between his fee and his opportunity cost. The profit function, $L(h)$, can be expressed as

$$\begin{aligned} L(h) &= f_{\%}(h) - wh \\ &= rs(h) - wh, \end{aligned}$$

and its time derivative as

$$L'(h) = rs'(h) - w.$$

The maximum value of $L(h)$ occurs at the number of hours h_L where $L'(h) = 0$,²⁴⁴ that is, where

$$rs'(h) = w.$$

Since $f'_{\%}(h) = rs'(h)$, the lawyer's profit reaches its maximum where the tangent to the $f_{\%}$ -curve becomes parallel to the o -line.²⁴⁵

We can now compare the sizes of h^* , h_C , and h_L . Note first that $s'(h_L) = w/r$, $s'(h^*) = w$, and $s'(h_C) = 0$. Under the assumptions²⁴⁶ of the economic model, $s'(h)$ is a decreasing function of h . Additionally, $w > 0$, and since $0 < r < 1$, $w/r > w$. Therefore, $h_L < h^* < h_C$.

APPENDIX C

THE PROPOSED FEE UNDER THE ECONOMIC MODEL

The size of the proposed contingent hourly-percentage fee can be expressed as

$$\begin{aligned} f_n(h) &= wh + x[s(h) - wh] \\ &= xs(h) + (1 - x)wh \end{aligned}$$

²⁴³ See note 21 and accompanying text *supra*.

²⁴⁴ We can show that $L''(h_L) < 0$ as follows: Since $L'(h) = rs'(h) - w$, $L''(h) = rs''(h)$. Since $r > 0$, $L''(h) < 0$ when $s''(h) < 0$. We showed earlier that $s''(h) < 0$ for $h_a < h < h_b$, where h_a is the number of hours below which no positive settlement is possible and h_b is the number of hours above which the settlement will not increase. See note 239 *supra*. Clearly, $h_a < h_L$, because a lawyer will always work more than the minimum number of hours required to produce a positive settlement. We also showed that $s'(h)$ is a decreasing function of h in the interval (h_a, h_b) and that $s'(h_b) = 0$. See *id.* Since $L'(h_L) = 0$, $s'(h_L) = w/r$. Since $w > 0$ and $0 < r < 1$, $w/r > 0$. Therefore, $s'(h_L) > s'(h_b)$, which implies that $h_L < h_b$. Since h_L falls within the range of h values where $s''(h) < 0$, $L''(h_L) < 0$. Therefore, $L(h)$ reaches its maximum when $L'(h) = 0$.

²⁴⁵ See Figure 3 *supra*.

²⁴⁶ See notes 21 & 239 *supra*.

where $f_n(h)$ denotes the fee function and the subscript n denotes the new combination of features. The client's net recovery after paying such a fee is

$$\begin{aligned} C(h) &= s(h) - f_n(h) \\ &= s(h) - [xs(h) + (1-x)wh] \\ &= (1-x)[s(h) - wh]. \end{aligned}$$

Thus,

$$C'(h) = (1-x)[s'(h) - w].$$

The maximum value of $C(h)$ occurs at the number of hours where $C'(h) = 0$,²⁴⁷ that is, where

$$s'(h) = w.$$

Since $f'_n(h) = xs'(h) + (1-x)w$, it follows that $f'_n(h) = w$ when $s'(h) = w$. Hence, at the point where the client's net recovery reaches its maximum, the s -curve tangent, the f_n -curve tangent, and the o -line all become parallel.²⁴⁸ Since at this point $s'(h) = w$, the client's net recovery under the proposed fee reaches a maximum at the same number of hours, h^* , where it reached a maximum under the certain hourly fee.²⁴⁹

Consider now the lawyer's profit. Under the proposed fee it can be expressed as

$$\begin{aligned} L(h) &= f_n(h) - wh \\ &= xs(h) + (1-x)wh - wh \\ &= x[s(h) - wh]. \end{aligned}$$

The time derivative becomes

$$L'(h) = x[s'(h) - w].$$

The maximum value of $L(h)$ occurs at the number of hours where $L'(h) = 0$,²⁵⁰ that is, where

$$s'(h) = w.$$

Thus, under the proposed fee, the lawyer's profit reaches its maximum at the same number of hours, h^* , where the client's net recovery is maximized.²⁵¹

²⁴⁷ Since $C'(h) = (1-x)[s'(h) - w]$, $C''(h) = (1-x)s''(h)$. When $C'(h) = 0$, $s'(h) = w$; hence, the point where $C'(h) = 0$ lies within the range where $s''(h) < 0$. See note 239 *supra*. Since $0 < x < 1$, $C''(h) < 0$ as long as $s''(h) < 0$. Therefore, $C(h)$ will reach its maximum when $C'(h) = 0$.

²⁴⁸ See Figure 4 *supra*.

²⁴⁹ See note 239 and accompanying text *supra*.

²⁵⁰ Since $L'(h) = x[s'(h) - w]$, $L''(h) = xs''(h)$. When $L'(h) = 0$, $s'(h) = w$; hence, the point where $L'(h) = 0$ lies within the range where $s''(h) < 0$. See note 239 *supra*. Since $0 < x < 1$, $L''(h) < 0$ as long as $s''(h) < 0$. Therefore, $L(h)$ will reach its maximum when $L'(h) = 0$.

²⁵¹ See text accompanying note 249 *supra*.

APPENDIX D

FEE PERFORMANCE IN A LAW FIRM SETTING

Consider a law firm consisting of n lawyers, some of whom may be associates. With respect to cases charged on an hourly fee basis, the time expended by each of these lawyers may be billed to the client at a different rate. Let us represent the hourly wage for lawyer k as w_k . Then, if he devotes h_k hours to the case, the firm will incur an opportunity cost of $w_k h_k$.

Let \mathbf{W} represent the vector (w_1, w_2, \dots, w_n) , and let \mathbf{H} represent the vector (h_1, h_2, \dots, h_n) . Assume that the settlement s can be expressed as a scalar function of the vector \mathbf{H} in a manner analogous to the simple s -curve of the ideal economic model.²⁵² The client's net recovery and the firm's profit then reduce to

$$C(\mathbf{H}) = s(\mathbf{H}) - f(\mathbf{H}),^{253}$$

and

$$L(\mathbf{H}) = f(\mathbf{H}) - \mathbf{W} \cdot \mathbf{H}.^{254}$$

1. The Certain Hourly Fee

Under the certain hourly fee,

$$f_h(\mathbf{H}) = \mathbf{W} \cdot \mathbf{H}.$$

Thus, the client's net recovery becomes

$$C(\mathbf{H}) = s(\mathbf{H}) - \mathbf{W} \cdot \mathbf{H}.$$

Taking the gradient of both sides of this equation, we have²⁵⁵

$$\begin{aligned}\nabla C(\mathbf{H}) &= \nabla s(\mathbf{H}) - \nabla(\mathbf{W} \cdot \mathbf{H}) \\ &= \nabla s(\mathbf{H}) - \mathbf{W}.\end{aligned}$$

At the point \mathbf{H}^* where $C(\mathbf{H})$ reaches its maximum, its gradient is zero,²⁵⁶ so that

$$\nabla s(\mathbf{H}^*) = \mathbf{W}.$$

²⁵² More precisely, we assume that $s(\mathbf{H})$ can be expressed as a twice-differentiable function of \mathbf{H} , and that for positive values of s , $\partial s / \partial h_k > 0$ and $\partial^2 s / \partial h_k^2 < 0$ for $k = 1, 2, \dots, n$. Cf. note 21 and accompanying text *supra*. Implicit in this assumption is the notion that the values of s are independent of the order in which the hours are expended by the various lawyers.

²⁵³ The symbol $f(\mathbf{H})$ represents the fee that will result from the expenditure of h_1, h_2, \dots, h_n hours by the n lawyers in the firm.

²⁵⁴ $\mathbf{W} \cdot \mathbf{H}$ is the scalar product of the vectors \mathbf{W} and \mathbf{H} , and equals $w_1 h_1 + w_2 h_2 + \dots + w_n h_n$.

²⁵⁵ The symbol ∇ represents the gradient operator, and is equivalent to the vector $(\partial / \partial h_1, \partial / \partial h_2, \dots, \partial / \partial h_n)$. Thus, when ∇ operates on a scalar function such as C , the result, ∇C , is the vector $(\partial C / \partial h_1, \partial C / \partial h_2, \dots, \partial C / \partial h_n)$.

²⁵⁶ We know that $C(\mathbf{H})$ does reach a maximum because it is a linear function of $s(\mathbf{H})$,

Thus, at \mathbf{H}^* , $\partial s(\mathbf{H})/\partial h_k = w_k$ for $k = 1, 2, \dots, n$.

The firm's profit becomes

$$\begin{aligned} L(\mathbf{H}) &= f_h(\mathbf{H}) - \mathbf{W} \cdot \mathbf{H} \\ &= \mathbf{W} \cdot \mathbf{H} - \mathbf{W} \cdot \mathbf{H} \\ &= 0. \end{aligned}$$

Therefore, the firm will be indifferent to the number of hours devoted by each lawyer to the case.

2. The Contingent Percentage Fee

Under the contingent percentage fee,

$$f_{\%}(\mathbf{H}) = rs(\mathbf{H}).$$

Thus, the client's net recovery becomes

$$\begin{aligned} C(\mathbf{H}) &= s(\mathbf{H}) - rs(\mathbf{H}) \\ &= (1 - r)s(\mathbf{H}). \end{aligned}$$

Taking the gradient of both sides of this equation, we have

$$\nabla C(\mathbf{H}) = (1 - r)\nabla s(\mathbf{H}).$$

Since $r < 1$, $\nabla C(\mathbf{H}) = 0$ where $\nabla s(\mathbf{H}) = 0$. Thus, to maximize the client's net recovery,²⁵⁷ lawyer k must continue to work until $\partial s(\mathbf{H})/\partial h_k = 0$. Recall that at \mathbf{H}^* , $\partial s(\mathbf{H})/\partial h_k = w_k$. Since $w_k > 0$ and since $\partial s(\mathbf{H})/\partial h_k$ is a decreasing function of h_k ,²⁵⁸ it follows that the client would wish each lawyer to work more than \mathbf{H}^* .

The firm's profit becomes

$$\begin{aligned} L(\mathbf{H}) &= f_{\%}(\mathbf{H}) - \mathbf{W} \cdot \mathbf{H} \\ &= rs(\mathbf{H}) - \mathbf{W} \cdot \mathbf{H}. \end{aligned}$$

Taking the gradient of both sides of this equation, we have

$$\nabla L(\mathbf{H}) = r\nabla s(\mathbf{H}) - \mathbf{W}.$$

Thus, $L(\mathbf{H})$ will be maximized²⁵⁹ where

$$\nabla s(\mathbf{H}) = \frac{\mathbf{W}}{r}.$$

which we assumed is monotonically increasing ($\partial s/\partial h_k > 0$ for $k = 1, 2, \dots, n$) and concave downward ($\partial^2 s/\partial h_k^2 < 0$ for $k = 1, 2, \dots, n$) until it levels off at a maximum value. See note 252 *supra*. See also notes 239, 241, & 244 *supra*. Hence, $C(\mathbf{H})$ reaches a maximum at the point where $\nabla C(\mathbf{H}) = 0$.

²⁵⁷ See note 256 *supra*.

²⁵⁸ See note 252 *supra*.

²⁵⁹ Because r is a positive constant, $L(\mathbf{H})$ reaches a maximum at the point where $\nabla L(\mathbf{H}) = 0$. See note 256 *supra*.

To maximize the firm's profit, lawyer k must continue to work until $\partial s(\mathbf{H})/\partial h_k = w_k/r$. Since $0 < r < 1$, $w_k/r > w_k$. Since at \mathbf{H}^* we found that $\partial s(\mathbf{H})/\partial h_k = w_k$, and since $\partial s(\mathbf{H})/\partial h_k$ is a decreasing function of h_k ,²⁶⁰ it follows that each lawyer will tend to underwork relative to \mathbf{H}^* . The economic interests of the firm clearly do not align with those of the client.

3. *The Proposed Fee*

Under the proposed contingent hourly-percentage fee,

$$f_n(\mathbf{H}) = \mathbf{W} \cdot \mathbf{H} + x[s(\mathbf{H}) - \mathbf{W} \cdot \mathbf{H}].$$

Thus, the client's net recovery becomes

$$\begin{aligned} C(\mathbf{H}) &= s(\mathbf{H}) - \mathbf{W} \cdot \mathbf{H} - x[s(\mathbf{H}) - \mathbf{W} \cdot \mathbf{H}] \\ &= (1 - x) [s(\mathbf{H}) - \mathbf{W} \cdot \mathbf{H}]. \end{aligned}$$

Taking the gradient of both sides of this equation, we have

$$\nabla C(\mathbf{H}) = (1 - x) [\nabla s(\mathbf{H}) - \mathbf{W}].$$

$C(\mathbf{H})$ will thus reach its maximum²⁶¹ where

$$\nabla s(\mathbf{H}) = \mathbf{W}.$$

Therefore, the client's net recovery under the proposed fee will reach its maximum at \mathbf{H}^* , the same point where it reaches its maximum under the certain hourly fee.²⁶²

The firm's profit becomes

$$\begin{aligned} L(\mathbf{H}) &= f_n(\mathbf{H}) - \mathbf{W} \cdot \mathbf{H} \\ &= x[s(\mathbf{H}) - \mathbf{W} \cdot \mathbf{H}]. \end{aligned}$$

Taking the gradient of both sides of this equation, we have

$$\nabla L(\mathbf{H}) = x[\nabla s(\mathbf{H}) - \mathbf{W}].$$

$L(\mathbf{H})$ will thus reach its maximum²⁶³ where

$$\nabla s(\mathbf{H}) = \mathbf{W}.$$

Therefore, the firm's profit under the proposed fee will also reach its maximum at \mathbf{H}^* .²⁶⁴ The economic interests of the firm and the client will align, not only in the

²⁶⁰ See note 252 *supra*.

²⁶¹ Because $x < 1$, $C(\mathbf{H})$ reaches a maximum at the point where $\nabla C(\mathbf{H}) = 0$. See note 256 *supra*.

²⁶² See text accompanying note 256 *supra*.

²⁶³ Because x is a positive constant, $L(\mathbf{H})$ reaches a maximum at the point where $\nabla L(\mathbf{H}) = 0$. See note 256 *supra*.

²⁶⁴ See text accompanying note 256 *supra*.

total number of hours devoted to the case, but also in the allocation of those hours among the lawyers in the firm, because the particular combination of h_1, h_2, \dots, h_n that will maximize the firm's profit will also maximize the client's net recovery.

APPENDIX E

EFFECTS OF UNCERTAINTY—SETTLEMENT SITUATION

1. *Conditions of Minimal Acceptability*

Suppose that at time h the defendant makes a settlement offer $s(h)$. The plaintiff's lawyer can then compute with certainty the profit, $L(h)$, that he would realize from accepting that offer, as well as the net recovery, $C(h)$, that his client would receive:

$$L(h) = f(h) - wh,$$

and

$$C(h) = s(h) - f(h).$$

Now let H represent the plaintiff's lawyer's estimate of the number of additional hours of work that would be required if the litigation were to continue through to judgment. Let P represent his estimate of the probability that judgment would be rendered for the plaintiff. Finally, let A represent the lawyer's estimate of the size of the judgment that would be awarded if the plaintiff were to win.²⁶⁵ Thus, the expected value of the total recovery that would result from working an additional H hours is given by

$$E[s(h + H)] = PA.²⁶⁶$$

With these three estimates, the lawyer can determine the expected value of the fee²⁶⁷ that he would receive if he rejected the given offer and continued the litigation to judgment. His expected profit from that fee would then be

$$E[L(h + H)] = E[f(h + H)] - w(h + H).$$

²⁶⁵ The quantities H , P , and A are functions of h since they represent estimates made at time h . To simplify the analysis, we treat these quantities as having the same value for the client and the lawyer. Cf. note 80 *supra*. This simplification is defensible because, if no settlement occurs and the case must continue through to judgment, some particular route to judgment will be followed, and with that route there will be associated particular values of H , P , and A . Thus, even though the particular route to judgment that will serve the interests of the lawyer will not necessarily serve the interests of the client (see Appendix F), and even though the route ultimately chosen will depend on the decisionmaker and his particular values of H , P , and A , we can realistically say that with respect to the settlement decision, the lawyer and the client will envisage the same route to judgment and that both will base their settlement desires thereon. Moreover, this simplification permits us to limit the focus in this Appendix to the conflict regarding settlement acceptance, and leave the conflict regarding the route to judgment for treatment in Appendix F.

²⁶⁶ For a discussion of "expected value," see note 84 *supra*.

²⁶⁷ The expected value of a continuous random variable z is $E(z) = \int_{-\infty}^{\infty} u\phi_z(u)du$, where ϕ_z is the probability density function of z , and u is a dummy variable of integration. Cf. note 84 *supra*.

The lawyer can now compare this expected profit with the certain profit that will result from accepting the offer in hand. That is, he can now compare $E[L(h + H)]$ with $L(h)$. If $L(h) < E[L(h + H)]$, a risk-neutral lawyer will reject the offer. Thus, any offer where $L(h) < E[L(h + H)]$ can be termed unacceptable. On the other hand, if $L(h) \geq E[L(h + H)]$, the lawyer may or may not wish to accept the offer, depending upon his view of the chances of receiving a larger offer.²⁶⁸ Thus, we can consider the condition $L(h) \geq E[L(h + H)]$ to be the lawyer's condition of minimal acceptability. If an offer fails to meet this condition, it will be unacceptable from the lawyer's economic viewpoint. If an offer meets this condition, it will be at least minimally acceptable, and may indeed be accepted.

Similar considerations apply to the client's net recovery. An offer will appear at least minimally acceptable from the client's economic viewpoint when $C(h) \geq E[C(h + H)]$.

Since the functions $C(h)$ and $L(h)$ involve $f(h)$, the conditions of minimal acceptability will depend on the fee arrangement. We can now derive expressions for the client's and the lawyer's conditions under the certain hourly fee, the contingent percentage fee, and the proposed contingent hourly-percentage fee.

a. *The Certain Hourly Fee*

(1) *Client's Condition*

Under the certain hourly fee, $f(h) = wh$. Thus,

$$\begin{aligned} C(h) &= s(h) - f(h) \\ &= s(h) - wh. \end{aligned}$$

Also,

$$\begin{aligned} E[C(h + H)] &= E[s(h + H)] - E[f(h + H)] \\ &= PA - w(h + H).^{269} \end{aligned}$$

Hence, the client's condition of minimal acceptability is

$$\begin{aligned} C(h) &\geq E[C(h + H)] \\ s(h) &\geq PA - wH. \end{aligned}$$

(2) *Lawyer's Condition*

The profit function is given by

$$\begin{aligned} L(h) &= f(h) - wh \\ &= wh - wh \\ &= 0. \end{aligned}$$

²⁶⁸ For a discussion of this decision process, see text accompanying notes 273-75 *infra*.

²⁶⁹ The second term on the right side of this equation does not contain P because payment of the fee is certain.

Also,

$$\begin{aligned} E[L(h + H)] &= E[f(h + H)] - wh - wH \\ &= w(h + H) - wh - wH \\ &= 0. \end{aligned}$$

Hence,

$$L(h) = E[L(h + H)].$$

Therefore, regardless of the size of the settlement offer, the lawyer will be indifferent between accepting the offer on the one hand and rejecting the offer and continuing the litigation through to judgment on the other.

b. *The Contingent Percentage Fee*

(1) *Client's Condition*

Under the contingent percentage fee, $f(h) = rs(h)$. Thus,

$$C(h) = s(h) - rs(h),$$

and

$$E[C(h + H)] = PA - rPA.^{270}$$

Hence, the client's condition of minimal acceptability is

$$\begin{aligned} C(h) &\geq E[C(h + H)] \\ (1 - r)s(h) &\geq (1 - r)PA \end{aligned}$$

or, since $r < 1$,

$$s(h) \geq PA.$$

(2) *Lawyer's Condition*

The profit function is given by

$$L(h) = rs(h) - wh,$$

and the expected profit by

$$E[L(h + H)] = rPA - wh - wH.$$

Hence, the lawyer's condition of minimal acceptability is

²⁷⁰ The second term on the right side of this equation contains P because payment of the fee is contingent on recovery.

$$L(h) \geq E[L(h + H)]$$

$$s(h) \geq PA - \frac{wH}{r}.$$

c. *The Proposed Fee*

(1) *Client's Condition*

Under the proposed fee, $f(h) = wh + x[s(h) - wh]$. Thus,

$$\begin{aligned} C(h) &= s(h) - wh - x[s(h) - wh] \\ &= (1 - x)[s(h) - wh]. \end{aligned}$$

Also,

$$\begin{aligned} E[C(h + H)] &= PA - Pw(h + H) - xP[A - w(h + H)] \\ &= (1 - x)[PA - Pw(h + H)].^{271} \end{aligned}$$

Hence, the client's condition of minimal acceptability is

$$\begin{aligned} C(h) &\geq E[C(h + H)] \\ s(h) &\geq PA - Pw(h + H) + wh. \end{aligned}$$

(2) *Lawyer's Condition*

The profit function is given by

$$\begin{aligned} L(h) &= wh + x[s(h) - wh] - wh \\ &= x[s(h) - wh], \end{aligned}$$

and the expected profit by

$$E[L(h + H)] = Pw(h + H) + xP[A - w(h + H)] - w(h + H).$$

Hence, the lawyer's condition of minimal acceptability is

$$\begin{aligned} L(h) &\geq E[L(h + H)] \\ s(h) &\geq PA - Pw(h + H) + wh - [(w/x)(1 - P)(h + H)].^{272} \end{aligned}$$

²⁷¹ Again, P appears throughout the right side of this equation because payment of the fee is contingent upon recovery.

²⁷² For this analysis, we have simplified the proposed fee by removing the policy requirement that the client's net recovery can never be negative. See note 37 *supra*. Mathematically we have simplified the fee formula from $f(h) = \text{MIN}(s(h), wh + x[s(h) - wh])$ to $f(h) = wh + x[s(h) - wh]$. The effect of this simplification is to convert the $C(h)$ formula from $C(h) = \text{MAX}(0, (1 - x)[s(h) - wh])$ to $C(h) = (1 - x)[s(h) - wh]$, and the $E[C(h + H)]$ formula from $E[C(h + H)] = \text{MAX}(0, (1 - x)[PA - Pw(h + H)])$ to $E[C(h + H)] = (1 - x)[PA - Pw(h + H)]$. These simplified formulas will yield a non-negative net recovery to the client only if $s(h) \geq wh$ and $A \geq w(h + H)$. We must therefore determine whether removing the non-negativity requirement affects the lawyer-client conflict of interest. For example, if such removal understated the conflict between lawyer and client, our general conclusion that the proposed fee eliminates economic conflict of interest

2. Conditions of Acceptance

If the only choices available upon receipt of an offer were either to accept the offer or to go to judgment, the conditions of minimal acceptability would also be conditions of acceptance; the first minimally acceptable offer would be accepted. Thus, if the lawyer received an offer minimally acceptable to him, and if he knew

would be weakened because at least part of that elimination might come artificially from the effect of removing the non-negativity requirement rather than from the effect of our proposed fee structure. A consideration of the cases where $A < w(h + H)$ or $s(h) < wh$, however, shows that if the possibility of a client's receiving a negative net recovery has any effect at all, it is to *overstate* the conflict. Therefore, if anything, removal of the non-negativity requirement strengthens our general conclusion that the proposed fee aligns economic interests.

Consider first the condition $A < w(h + H)$ and assume that $C(h) = \text{MAX}(0, (1 - \alpha)[s(h) - wh])$. It is highly unlikely that A would be less than $w(h + H)$, because a lawyer presumably would not accept a case if he estimated that the judgment after victory would yield less than his opportunity cost. However, an unexpected turn of events after the lawyer has accepted the case could reduce his estimate of the judgment so that $A < w(h + H)$. At such a point either $s(h) \geq wh$, or $s(h) < wh$. If $s(h) \geq wh$, then $C(h) \geq 0$, while $E[C(h + H)] = \text{MAX}(0, (1 - \alpha)[PA - Pw(h + H)]) = 0$; hence, the client would want to accept the offer. On the lawyer's side, $L(h) \geq 0$, while $E[L(h + H)] < 0$; hence, the lawyer, too, would want to accept the offer, and no conflict exists. Removing the non-negativity requirement in this situation will affect only $E[C(h + H)]$: It will now become negative. This will simply reinforce the client's desire to accept the offer.

If $s(h) < wh$ while $A < w(h + H)$, then $C(h) = \text{MAX}(0, (1 - \alpha)[s(h) - wh]) = 0$, and $E[C(h + H)] = \text{MAX}(0, (1 - \alpha)[PA - Pw(h + H)]) = 0$. Thus, whether or not the lawyer accepts the offer, his decision cannot affect the client's economic interests. If we remove the non-negativity requirement, however, $C(h) < 0$, and $E[C(h + H)] < 0$. On the lawyer's side, $L(h) < 0$ and $E[L(h + H)] < 0$, and the lawyer will accept the offer if $|L(h)| < |E[L(h + H)]|$ because that will minimize his loss. But unless $|C(h)| \leq |E[C(h + H)]|$, a decision to accept will hurt the client. Thus, removing the non-negativity requirement gives rise to a potential source of lawyer-client conflict.

The only remaining possibility is that $A \geq w(h + H)$ and $s(h) < wh$. Because $A \geq w(h + H)$, the non-negativity requirement has no effect on $E[C(h + H)]$ and $E[L(h + H)]$. Therefore, if removing the non-negativity requirement has any effect on the conflict between lawyer and client, it must come from the effects that such removal has on $C(h)$ and $L(h)$. With the requirement in force, $C(h) = \text{MAX}(0, (1 - \alpha)[s(h) - wh]) = 0$ because $s(h) < wh$. This means that if the current offer is accepted, the lawyer will receive the entire $s(h)$. But since his opportunity cost is wh , he will suffer a loss: $L(h) = s(h) - wh < 0$. If we remove the non-negativity requirement, $C(h) = (1 - \alpha)[s(h) - wh]$ and $L(h) = \alpha[s(h) - wh]$. Since $s(h) < wh$, both $C(h)$ and $L(h)$ will be negative; but since $0 < \alpha < 1$, the loss to the lawyer represented by $L(h)$ decreases as we remove the non-negativity requirement. Therefore, the lawyer will be more inclined to accept the settlement offer when the non-negativity requirement does not prevail. The client, on the other hand, becomes less inclined to accept the offer: With the non-negativity requirement, $C(h) = 0$; without it, $C(h) = (1 - \alpha)[s(h) - wh] < 0$. Once again, removing the non-negativity requirement has increased the potential conflict between lawyer and client.

In sum, the effect, if any, of simplifying the fee formula to allow a negative net recovery to the client is that the analysis of the proposed fee will be conducted under conditions of more severe economic conflict than would prevail under the correct formula. Thus, the conclusions that we show to be valid for the simplified formula will be valid a fortiori for the correct formula.

with certainty that no further minimally acceptable offers would be tendered, he would wish to accept the offer.

In reality, however, the lawyer cannot know whether he will receive another minimally acceptable offer. Consequently, the possibility of subsequent offers will affect his strategy. If the lawyer believes that the investment of additional time will result in a more lucrative settlement offer, he may decide to reject the offer in hand, even though that offer meets his condition of minimal acceptability.

More precisely, the lawyer will wish to accept the offer if the resulting profit is greater than or equal to his estimate of the profit that would result from rejecting the offer. Suppose the lawyer receives an offer $s(h)$ that meets his condition of minimal acceptability. If he accepts the offer, the profit that will result is given by

$$L(h) = f(h) - wh.$$

The expected profit that would result from rejecting the offer is more complex. The lawyer must estimate not only the expected profit that would result from going to judgment, but also two additional factors: (1) the probability (α) that there will be another offer minimally acceptable to him if he devotes further time to the case, and (2) the size (\bar{s}) of that minimally acceptable offer.²⁷³ Using these estimates, the lawyer can then determine the expected value of the profit that would result from rejecting the offer in hand and continuing on. By comparing this expected profit with the certain profit that would result from accepting the offer, the lawyer can decide whether accepting the offer would serve his own economic interests.

Similar considerations apply to the economic interests of the client. Suppose that the given offer is minimally acceptable to the client. If that offer is accepted, the resulting net recovery will be

$$C(h) = s(h) - f(h).$$

This net recovery must be compared with the expected value of the net recovery that would result from rejecting the offer and continuing on. That expected net recovery depends not only on the estimated net recovery that would result from going to judgment, but also on two additional estimates: (1) the probability that there will be another offer minimally acceptable to the client, and (2) the size of that minimally acceptable offer. A comparison of the resulting expected net re-

²⁷³ More precisely, \bar{s} is a conditional expected value. Suppose that at time h one course of action being considered by the lawyer is to work one additional hour, and then to await or solicit another offer. With respect to that anticipated offer,

$$\bar{s} = \frac{1}{\alpha} \int_m^{\infty} u \phi_s(u) du$$

and

$$\alpha = \int_m^{\infty} \phi_s(u) du$$

where m is the lowest offer that would meet the lawyer's condition of minimal acceptability at time $h + 1$, and ϕ_s is the probability density function of s at time $h + 1$. See A. PAPOULIS, *PROBABILITY, RANDOM VARIABLES, AND STOCHASTIC PROCESSES* § 5-4, at 143 (1965).

covery with the certain recovery that will result from accepting the offer will determine which of the two strategies, accepting or rejecting the offer, will best serve the client's economic interests.

Using the method just described, we can now derive expressions for the client's and the lawyer's conditions of acceptance under the certain hourly fee, the contingent percentage fee, and the proposed contingent hourly-percentage fee.

a. *The Certain Hourly Fee*

(1) *Client's Condition*

Under the certain hourly fee, $f(h) = wh$. Thus, accepting the offer will yield a net recovery of

$$C(h) = s(h) - wh,$$

and rejecting the offer will yield an expected net recovery of

$$\alpha[s - w(h + 1)] + (1 - \alpha)[PA - w(h + H)].^{274}$$

Hence, the client's condition of acceptance is that $C(h)$ be greater than the expected net recovery from rejecting the offer:

$$s(h) \geq \alpha[s - w(h + 1)] + (1 - \alpha)[PA - w(h + H)] + wh.$$

(2) *Lawyer's Condition*

Accepting the offer will give the lawyer a profit of

$$\begin{aligned} L(h) &= wh - wh \\ &= 0, \end{aligned}$$

and rejecting the offer will give him an expected profit of

$$\alpha[w(h + 1) - w(h + 1)] + (1 - \alpha)[w(h + H) - w(h + H)],$$

²⁷⁴ The bracketed quantity in the first term of this expression is the expected net recovery, given that $s(h + 1)$ is minimally acceptable. The use of $h + 1$ for the time of the next offer results in no loss of generality, since the use of hours as the unit of time is arbitrary. The bracketed quantity in the second term is the expected net recovery, given that $s(h + 1)$ is not minimally acceptable.

Implicit in this calculation is a tentative decision rule for time $h + 1$. For planning purposes at time h , we assume that if $s(h + 1)$ is minimally acceptable it will be accepted, and that otherwise it will be necessary to go to judgment. This decision rule is an approximation, since it is possible that even if $s(h + 1)$ is minimally acceptable, it will be turned down because of the expectation of another minimally acceptable offer $s(h + k)$, $k > 1$. Also, it is remotely possible that, with $s(h)$ acceptable and $s(h + 1)$ unacceptable, $s(h + 2)$ could be acceptable. To take this possibility into account, however, would require a decision rule so complex that it would be entirely unrealistic to suppose that anyone would use it. Furthermore, the use, at time h , of this tentative decision rule for time $h + 1$ affects only the decision at time h , and does not commit the decisionmaker to accept any offer at time $h + 1$. If and when another minimally acceptable offer is received, the entire decision process is repeated anew.

which also equals zero. Thus, regardless of the size of the offer in hand, the profit from accepting the current offer equals the expected profit from rejecting it. The lawyer will therefore be indifferent between accepting and rejecting any given offer.

b. *The Contingent Percentage Fee*

(1) *Client's Condition*

Under the contingent percentage fee, $f(h) = rs(h)$. Thus, accepting the offer will yield a net recovery of

$$C(h) = s(h) - rs(h),$$

and rejecting the offer will yield an expected net recovery of

$$\alpha(1 - r)\bar{s} + (1 - \alpha)(1 - r)PA.$$

Hence, the client's condition of acceptance is

$$s(h) \geq \alpha\bar{s} + (1 - \alpha)PA.$$

(2) *Lawyer's Condition*

Accepting the offer will give the lawyer a profit of

$$L(h) = rs(h) - wh,$$

and rejecting the offer will give him an expected profit of

$$\alpha[r\bar{s} - w(h + 1)] + (1 - \alpha)[rPA - w(h + H)].$$

Hence, the lawyer's condition of acceptance is that $L(h)$ exceed the expected profit from rejecting the offer:

$$s(h) \geq \alpha(\bar{s} - \frac{w}{r}) + (1 - \alpha)(PA - \frac{wH}{r}).$$

c. *The Proposed Fee*

(1) *Client's Condition*

Under the proposed fee, $f(h) = wh + x[s(h) - wh]$.²⁷⁵ Thus, accepting the offer will yield a net recovery of

$$C(h) = (1 - x)[s(h) - wh],$$

and rejecting the offer will yield an expected net recovery of

$$\alpha(1 - x)[\bar{s} - w(h + 1)] + (1 - \alpha)(1 - x)P[A - w(h + H)].$$

²⁷⁵ Again we are simplifying the analysis by not qualifying the proposed fee to prevent a negative net recovery to the client. The effect of this simplification is similar to that discussed in note 272 *supra*.

Hence, the client's condition of acceptance is

$$s(h) \geq \alpha[\bar{s} - w(h+1)] + (1-\alpha)P[A - w(h+H)] + wh.$$

(2) *Lawyer's Condition*

Accepting the offer will give the lawyer a profit of

$$L(h) = x[s(h) - wh],$$

and rejecting the offer will give him an expected profit of

$$\alpha x[\bar{s} - w(h+1)] + (1-\alpha)[Px\bar{A} + (1-x)Pw(h+H) - w(h+H)].$$

Hence, the lawyer's condition of acceptance is

$$x[s(h) - wh] \geq \alpha x[\bar{s} - w(h+1)] + (1-\alpha)[Px\bar{A} + (1-x)Pw(h+H) - w(h+H)].$$

Dividing by x and adding wh , we get

$$s(h) \geq \alpha[\bar{s} - w(h+1)] + (1-\alpha)[P\bar{A} - (1 - \frac{1}{x})Pw(h+H) - (\frac{w}{x})(h+H)] + wh$$

$$s(h) \geq \alpha[\bar{s} - w(h+1)] + (1-\alpha)[P\bar{A} - Pw(h+H)] + (1-\alpha)[-(\frac{w}{x})(h+H) + \frac{Pw}{x}(h+H)] + wh$$

$$s(h) \geq \alpha[\bar{s} - w(h+1)] + (1-\alpha)P[\bar{A} - w(h+H)] + wh - (1-\alpha)(\frac{w}{x})(1-P)(h+H).$$

3. *Ranges of Conflict*

Thus far we have developed two sets of conditions. The first set of conditions, those for minimal acceptability, were derived by comparing a given offer with the option of going to judgment. The second set of conditions, those for acceptance, were derived by comparing the given offer with the option of taking one's chances on future offers. The latter derivation was linked to the former by the quantity α , which involved the concept of minimal acceptability. As both derivations show, the conditions of lawyer and client differ with respect to both minimal acceptability and acceptance. We can examine the extent to which the economic interests of lawyer and client differ by analyzing these differences. We can simplify this analysis by observing that, for both lawyer and client, the threshold of minimal acceptability is lower than the threshold of acceptance.²⁷⁶ Thus, if an offer meets

²⁷⁶ A proof of this assertion may be outlined as follows. Let m_c and m_L represent the client's and the lawyer's respective thresholds of minimal acceptability, and let s_c and s_L represent their respective thresholds of acceptance. For the contingent percentage fee, we found that $m_c = PA$ (see p. 609 *supra*) and $s_c = \alpha\bar{s} + (1-\alpha)PA$ (see p. 614 *supra*). If m_c were greater than s_c , then $PA > \alpha\bar{s} + (1-\alpha)PA$, which can happen only if $\bar{s} < PA$. But by definition \bar{s} must be greater than m_c , because \bar{s} is the expected value of $s(h+1)$, given that $s(h+1) > m_c$. Since $m_c = PA$, \bar{s} cannot be less than PA . Therefore, $s_c \geq m_c$.

For the lawyer, $m_L = PA - wH/r$ (see p. 610 *supra*), and $s_L = \alpha(\bar{s} - w/r) + (1-\alpha)(PA - wH/r)$ (see p. 614 *supra*). If m_L were greater than s_L , then $\bar{s} - PA < (w/r)(1-H)$. But

the lawyer's condition of acceptance, it will also meet his condition of minimal

since \bar{s} is approximately the same for lawyer and client (*see* note 277 *infra*), and since we just showed that \bar{s} cannot be less than PA for the client, \bar{s} cannot be less than PA for the lawyer. So, $\bar{s} - PA > 0$, and unless $H \leq 1$, we know $1 - H < 0$. Thus, the condition $\bar{s} - PA < (w/r)(1 - H)$ cannot be met because the left side is positive and the right side is negative. Hence, $s_L \geq m_L$.

Similarly, for the proposed fee

$$m_C = PA - Pw(h + H) + wh$$

(*see* p. 610 *supra*), and

$$s_C = \alpha[\bar{s} - w(h + 1)] + (1 - \alpha)P[A - w(h + H)] + wh$$

(*see* p. 615 *supra*). If m_C were greater than s_C , then

$$PA - Pw(h + H) + wh > \alpha[\bar{s} - w(h + 1)] + PA - Pw(h + H) + wh - \alpha P[A - w(h + H)]$$

$$\alpha[\bar{s} - w(h + 1)] < \alpha P[A - w(h + H)],$$

which can be true only if

$$\left(\frac{\bar{s}}{w}\right) - 1 < \frac{PA}{w} - P(h + H) + h.$$

Since w is the normal wage for only one hour's work, we can make the approximation that $\bar{s} \gg w$, so that $(\bar{s}/w) - 1 \approx \bar{s}/w$. Using this approximation, the requirement for $m_C > s_C$ becomes

$$\frac{\bar{s}}{w} < \left(\frac{PA}{w}\right) - P(h + H) + h.$$

But since \bar{s} is, by definition, the conditional expected value of an offer that is minimally acceptable (*see* text accompanying note 273 *supra*), \bar{s} cannot be less than m_C . Hence, $\bar{s}/w \geq m_C/w$. Since

$$\frac{m_C}{w} = \frac{PA}{w} - P(h + H) + h,$$

it follows that \bar{s}/w cannot be less than $(PA/w) - P(h + H) + h$. Hence, m_C cannot be greater than s_C .

For the lawyer,

$$m_L = PA - Pw(h + H) + wh - \left(\frac{w}{x}\right)(1 - P)(h + H)$$

(*see* p. 610 *supra*), and

$$s_L = \alpha[\bar{s} - w(h + 1)] + (1 - \alpha)P[A - w(h + H)] + wh - (1 - \alpha)\left(\frac{w}{x}\right)(1 - P)(h + H)$$

(*see* p. 615 *supra*). If m_L were greater than s_L , then

$$PA - Pw(h + H) + wh - \left(\frac{w}{x}\right)(1 - P)(h + H) > \alpha[\bar{s} - w(h + 1)] + PA - Pw(h + H) -$$

acceptability, and he will wish to accept it. Conversely, if the offer does not meet the lawyer's condition of acceptance, he will reject the offer. The same is true of the client. Consequently, we can analyze the potential for conflict of interest by comparing the lawyer's and the client's conditions of acceptance.

Let s_L represent the lawyer's threshold of acceptance, and let s_C represent the client's threshold of acceptance. We can then express their conditions of acceptance as $s(h) \geq s_L$ and $s(h) \geq s_C$. A conflict will arise when the offer in hand lies in the range between s_L and s_C ; the wider the range, the greater the potential for conflict. To compare s_L and s_C , we first make the simplifying approximations that the quantities α and \bar{s} do not materially vary between lawyer and client.²⁷⁷ We can now determine the size of the range of conflict by subtraction.²⁷⁸

a. *The Contingent Percentage Fee*

The client's and the lawyer's thresholds of acceptance are

$$\begin{aligned} & \alpha P[A - w(h + H)] + wh - \\ & \left(\frac{w}{x}\right) (1 - P) (h + H) + \\ & \alpha \left(\frac{w}{x}\right) (1 - P) (h + H) \\ & \alpha[\bar{s} - w(h + 1)] < \alpha P[A - w(h + H)] - \alpha \left(\frac{w}{x}\right) (1 - P) (h + H). \end{aligned}$$

If we use again the approximation $(\bar{s}/w) - 1 \simeq (\bar{s}/w)$, the condition for $m_L > s_L$ becomes

$$\frac{\bar{s}}{w} < \frac{PA}{w} - P(h + H) + h - \left(\frac{1}{x}\right) (1 - P) (h + H).$$

But since \bar{s} is minimally acceptable, it cannot be less than m_L ; hence, $\bar{s}/w > m_L/w$. Since

$$\frac{m_L}{w} = \left(\frac{PA}{w}\right) - P(h + H) + h - \left(\frac{1}{x}\right) (1 - P) (h + H),$$

it follows that \bar{s}/w cannot be less than $(PA/w) - P(h + H) + h$. Therefore, m_L cannot be greater than s_L .

²⁷⁷ These approximations are reasonable for the following reasons. The quantity $(1 - \alpha)$ represents the probability that the defendant, after making a minimally acceptable offer, will suddenly cease making such offers. Such a change of strategy would likely result from the discovery of evidence not known to the defendant at time h , or perhaps from a change in the defendant's attitude toward bargaining. Thus, we can expect $(1 - \alpha)$ to be small for both lawyer and client, which means that α is close to 1. Moreover, in many cases where a defendant's information or attitude has changed, he would not merely cease making minimally acceptable offers, but would become unwilling to bargain at all, except perhaps for making a nominal settlement offer. The probability of such an event is unrelated to the lawyer's and the client's conditions of minimal acceptability, and that probability will therefore be equal for the lawyer and the client. Consequently, no great inaccuracy is introduced by assuming that the value of α is approximately the same for lawyer and client. Comparison of the two equations in note 273 *supra* indicates that if α does not materially vary between lawyer and client, neither will \bar{s} .

²⁷⁸ Since the lawyer is indifferent under the certain hourly fee, he has no definable threshold of acceptance; hence, no quantitative comparison is possible. But clearly there is no alignment of economic interests under that fee. Cf. text accompanying note 57 *supra*.

$$s_C = \alpha \bar{s} + (1 - \alpha)PA,^{279}$$

and

$$s_L = \alpha(\bar{s} - \frac{w}{r}) + (1 - \alpha)(PA - \frac{wH}{r}).^{280}$$

Thus, the lawyer's threshold is lower than the client's. The difference, or range of conflict, under the contingent percentage fee is

$$\begin{aligned} R_{\%} &= s_C - s_L \\ &= \alpha \frac{w}{r} + (1 - \alpha) \frac{wH}{r}. \end{aligned}$$

b. *The Proposed Fee*

The client's and the lawyer's thresholds of acceptance are

$$s_C = \alpha[\bar{s} - w(h + 1)] + (1 - \alpha)P[A - w(h + H)] + wh,^{281}$$

and

$$\begin{aligned} s_L &= \alpha[\bar{s} - w(h + 1)] + (1 - \alpha)P[A - w(h + H)] + wh - \\ &\quad (1 - \alpha) \left(\frac{w}{x}\right) (1 - P) (h + H).^{282} \end{aligned}$$

Again, the lawyer's threshold is lower than the client's. The range of conflict under the proposed fee is

$$\begin{aligned} R_n &= s_C - s_L \\ &= (1 - \alpha) \left(\frac{w}{x}\right) (1 - P) (h + H). \end{aligned}$$

c. *Comparison of Ranges of Conflict*

For both the contingent percentage fee and the proposed fee, the size of the range of conflict depends on the size of α . If $\alpha = 1$ —that is, if the lawyer feels certain that he will receive or will be able to solicit another offer that is at least minimally acceptable—then $R_n = 0$, while $R_{\%} = w/r$. Under these circumstances, the proposed fee aligns the interests of lawyer and client perfectly, but the contingent percentage fee does not.

In most cases, although $\alpha \neq 1$, we can expect the size of α to be close to 1, so that $(1 - \alpha)$ will be small compared to α .²⁸³ The expression for $R_{\%}$ contains terms proportional to both α and $(1 - \alpha)$, but the expression for R_n contains only a term proportional to $(1 - \alpha)$. Since this will cause R_n to be closer to 0 than $R_{\%}$ in most cases, the proposed fee compares favorably with the contingent percentage fee.

Nevertheless, it is possible that in some cases α will be significantly less than 1. These are cases where the lawyer perceives a substantial likelihood that the defen-

²⁷⁹ See p. 614 *supra*.

²⁸⁰ See *id.*

²⁸¹ See p. 615 *supra*.

²⁸² See *id.*

²⁸³ See note 277 *supra*.

dant will make no more minimally acceptable offers. To compare the sizes of $R_{\%}$ and R_n in such cases, let us assign reasonable values to the various parameters. Let $r = .33$, $\alpha = .10$, and $P = 0.9$.²⁸⁴ Then

$$R_{\%} = 3\alpha w + 3(1 - \alpha)wH$$

and

$$R_n = (1 - \alpha)w(h + H).$$

Hence, $R_n < R_{\%}$ when

$$h < 2H + \frac{3\alpha}{1 - \alpha}.$$

Thus, in cases where α is significantly less than 1, the proposed fee compares favorably with the contingent percentage fee for offers that are received early in the litigation: At this stage of the litigation there is less potential for conflict because the range of conflict is smaller under the proposed fee. While the opposite is true for late offers in these cases, the potential for harm to the interests of the client is probably greatest in the early stages, when some lawyers accept settlement offers that are low compared with the judgment that could be obtained, but high compared with the lawyer's opportunity cost for the small number of hours expended.

APPENDIX F

EFFECTS OF UNCERTAINTY—JUDGMENT SITUATION

Let us consider a situation where the plaintiff's lawyer does not have in hand a settlement offer minimally acceptable to either him or the plaintiff,²⁸⁵ and where no such offer is later made. In such a case, although the lawyer does not face a settlement decision, a conflict of interest can nevertheless arise: The lawyer must decide how many hours to spend in going to judgment, but the number of hours of work that best serves his economic interests may not serve the best interests of his client.

Suppose that the lawyer has already worked h hours in preparing the case, and is trying to decide whether to devote one additional hour to preparatory work. Presumably he will devote additional time only if he feels that he will thereby increase P (his estimate of the probability that judgment will eventually be rendered for the plaintiff), A (his estimate of the size of the judgment that will be awarded if the plaintiff wins), or both. Let P_0 and A_0 represent the values that P and A would take if preparatory work were to cease at time h , the time at which the decision is being made. Let P_1 and A_1 be the values of P and A that the lawyer

²⁸⁴ See notes 178-79 and accompanying text *supra*. Since the expressions for $R_{\%}$ and R_n both contain the term H , quantitative comparison requires that H take the same value in both expressions. Thus, we compare the ranges of conflict at points where the estimated number of additional hours of work is the same under both fees.

²⁸⁵ The lawyer may have already rejected one or more offers, or he may have received no offers at all.

feels will result from an additional hour of preparatory work. Let T represent the estimated number of hours that must be spent in reducing the case to judgment; T can be thought of as a fixed wrap-up time.²⁸⁶ Then, for the client, the expected value of the net recovery that will result from h hours of preparatory work is²⁸⁷

$$C_0 = P_0A_0 - P_0f_0,$$

where f_0 is the fee that will result if the lawyer devotes h hours to preparatory work, expends T hours of wrap-up time, and wins an award of A_0 . Similarly, the expected value of the net recovery that will result from $h + 1$ hours of preparatory work is

$$C_1 = P_1A_1 - P_1f_1.$$

A risk-neutral client will want the lawyer to work the additional hour when $C_1 > C_0$. For the lawyer, the expected values of the respective profits that will result from h and $h + 1$ hours of preparatory work are

$$L_0 = P_0f_0 - w(h + T),$$

and

$$L_1 = P_1f_1 - w(h + 1 + T).$$

A risk-neutral lawyer will want to work the additional hour when $L_1 > L_0$.

We can now show how the effect of the additional hour of preparatory work depends on the fee arrangement.

1. *The Contingent Percentage Fee*

Under the contingent percentage fee, $f_0 = rA_0$ and $f_1 = rA_1$. Hence, for the client,

$$\begin{aligned} C_0 &= P_0A_0 - P_0rA_0 \\ &= (1 - r)P_0A_0, \end{aligned}$$

and

$$C_1 = (1 - r)P_1A_1.$$

²⁸⁶ To simplify the analysis, we assume that the litigation consists of two distinct phases—preparatory work and wrap-up—and that the latter is a constant. In other words, wrap-up time represents an unavoidable investment of time in finishing up a trial and in handling any formalities.

²⁸⁷ We are concerned here only with contingent fee arrangements because under the certain hourly fee the lawyer is theoretically indifferent to the number of hours he works. See pp. 608-09 & 613-14 *supra*. Cf. text accompanying note 26 *supra*. This means that a lawyer working for a certain hourly fee has no definable cut-off point for preparatory work. Consequently, we can compare quantitatively only the contingent percentage fee and the proposed contingent hourly-percentage fee. But clearly there is no alignment of economic interests under the certain hourly fee. Cf. text accompanying note 57 *supra*.

Thus, the client will want the lawyer to work the additional hour when

$$\begin{aligned} C_1 &> C_0 \\ P_1 A_1 - P_0 A_0 &> 0. \end{aligned}$$

For the lawyer,

$$L_0 = P_0 r A_0 - w(h + T),$$

and

$$L_1 = P_1 r A_1 - w(h + 1 + T).$$

Thus, the lawyer will want to work the additional hour when

$$\begin{aligned} L_1 &> L_0 \\ P_1 A_1 - P_0 A_0 &> \frac{w}{r}. \end{aligned}$$

Hence, under the contingent percentage fee, the additional hour serves the client's interests whenever that hour causes even the slightest increase in the expected value of the judgment; the lawyer's interests, however, will not be served unless the increase in the expected judgment exceeds w/r . Thus, under the contingent percentage fee, the lawyer will always tend to underwork. This substantial conflict of interest takes a form very similar to the conflict found for the contingent percentage fee under the economic model.²⁸⁸

2. *The Proposed Fee*²⁸⁹

Under the proposed fee, $f_0 = w(h + T) + x[A_0 - w(h + T)]$ and $f_1 = w(h + 1 + T) + x[A_1 - w(h + 1 + T)]$. Hence, for the client,

$$\begin{aligned} C_0 &= P_0 A_0 - P_0 [x A_0 + (1 - x)w(h + T)] \\ &= (1 - x) [P_0 A_0 - P_0 w(h + T)], \end{aligned}$$

and

$$C_1 = (1 - x) [P_1 A_1 - P_1 w(h + 1 + T)].$$

Thus, the client will want the lawyer to work the additional hour when

$$\begin{aligned} C_1 &> C_0 \\ P_1 A_1 - P_0 A_0 &> (P_1 - P_0)w(h + T) + P_1 w. \end{aligned}$$

²⁸⁸ We demonstrated in Appendix B the conflict under the economic model.

²⁸⁹ To simplify this analysis, we ignore the policy requirement (discussed in note 37 *supra*) that the client never receive a negative net recovery under the proposed fee. Analysis similar to that in note 272 *supra* shows that taking into account this non-negativity requirement would only strengthen our conclusions about the proposed fee's alignment of interests.

For the lawyer,

$$L_0 = P_0 w(h + T) + P_0 x[A_0 - w(h + T)] - w(h + T),$$

and

$$L_1 = P_1 w(h + 1 + T) + P_1 x[A_1 - w(h + 1 + T)] - w(h + 1 + T).$$

Thus, the lawyer will want to work the additional hour when

$$\begin{aligned} L_1 &> L_0 \\ P_1 w(h + 1 + T) + P_1 x[A_1 - w(h + 1 + T)] - w(h + 1 + T) &> P_0 w(h + T) + P_0 x[A_0 - w(h + T)] - w(h + T) \\ x[P_1 A_1 - P_0 A_0 - (P_1 - P_0)w(h + T) - P_1 w] + (P_1 - P_0)w(h + T) - (1 - P_1)w &> 0 \\ x(P_1 A_1 - P_0 A_0) &> x(P_1 - P_0)w(h + T) + xP_1 w - (P_1 - P_0)w(h + T) + (1 - P_1)w \\ P_1 A_1 - P_0 A_0 &> \frac{(P_1 - P_0)w(h + T) + P_1 w + (1 - P_1)w}{x} \end{aligned}$$

Comparison of the results for the lawyer and the client shows that the two inequalities are identical except for the term $(w/x) [(1 - P_1) - (P_1 - P_0)(h + T)]$. Thus, under the proposed fee, some misalignment of interests may occur.

In many cases the defendant's liability is clear, and the only real issue at trial is the size of the award.²⁹⁰ In such cases, since $P_0 = P_1 = 1$, the above term equals zero. At least here, then, the proposed fee aligns the lawyer's and the client's interests perfectly, while the contingent percentage fee does not.

In cases where the defendant's liability is not clear, the size of the misalignment term becomes difficult to predict. The first of the two terms in brackets depends only on the probability P_1 . The second term, however, depends on both the time of the decision and the amount of change in probability that will result from one hour's additional preparatory work. Depending upon the relative sizes of these variables, $(1 - P_1)$ may be greater than, equal to, or less than $(P_1 - P_0)(h + T)$. Therefore, in some cases the lawyer's and the client's interests may be aligned under the proposed fee; in others, the lawyer may tend to underwork or to overwork.²⁹¹

²⁹⁰ See Grady, *supra* note 5, at 24.

²⁹¹ In the foregoing analysis we have assumed that the lawyer and the client are risk-neutral. Analysis of risk-aversion in this judgment context is even more complicated than the similar analysis in the settlement context. Cf. note 86 and accompanying text *supra*. In that context, the choice was between a certain sum and a contingent one: The decision was whether or not to take a risk. In the present context, however, the choice is between two uncertain sums. The lawyer and the client will be taking a risk whether or not the additional hour is expended. Because of this complexity one cannot predict as a general matter whether risk-aversion will lead the decisionmaker to choose fewer hours of work or more. For example, it may turn out that a risk-averse lawyer will hesitate to risk investing an additional hour unless L_1 is substantially greater than L_0 ; on the other hand, even though

APPENDIX G

FORWARDING FEES

Suppose that one lawyer (the "forwarding lawyer") refers a case to a second lawyer (the "working lawyer"), and that in return the forwarding lawyer is to receive a fraction y of the ultimate fee f . By analyzing the circumstances that make it economically attractive for the working lawyer to accept the case on these terms, we can examine the effect that a shift from the contingent percentage fee to the proposed fee would have on the prevalence of fractional forwarding fees.

We can approach this problem by assuming that the second lawyer will accept the case only if he feels that the total time H that he expects to devote to the case will result in a fee at least as great as his opportunity cost. Then, his condition for accepting the case is

$$(1 - y)E(f) \geq wH.$$

Let P represent the working lawyer's estimate of the probability that the plaintiff will recover some amount greater than zero, whether by settlement or judgment, and let R represent the conditional expected value of the recovery given that there is a positive recovery.

Under the contingent percentage fee, $E(f) = PrR$. Hence, the condition for accepting the case becomes $(1 - y)PrR \geq wH$, or

$$\frac{1}{P} \leq (1 - y)rq,$$

where q is the payoff ratio,²⁹² defined as R/wH .

Under the proposed fee, $E(f) = P[wH + \pi(R - wH)]$.²⁹³ Hence, the condition becomes

$$(1 - y)P[\pi R + (1 - \pi)wH] \geq wH$$

$$\frac{1}{P} \leq (1 - y)(\pi q + 1 - \pi).$$

To compare these conditions, let us assume that the working lawyer has agreed to charge a contingent percentage fee of $33\frac{1}{3}\%$, and has also agreed to pay a third of that fee to the forwarding lawyer. The condition for accepting the case under the contingent percentage fee then becomes

$$\frac{1}{P} \leq \frac{2}{9} q.$$

Hence, for any given value of q , the smallest value of P for which the working lawyer will accept the case is the value of P that satisfies the following equation:

$L_1 < L_0$, he might still wish to invest the hour because $P_1 > P_0$ and because his aversion to risk causes him to place heavy emphasis on reducing the probability of losing the case. In light of this complexity, we will not introduce risk attitudes here. Cf. note 89 *supra*.

²⁹² See text accompanying note 189 *supra*.

²⁹³ We can safely assume that $R \geq wH$, so that the formula for the proposed fee cannot yield a negative net recovery to the client. See notes 37 & 272 *supra*.

$$P = \frac{4.5}{q}$$

This equation is depicted by the broken curve in Figure 7. For example, if $q = 9$ in a given case, the working lawyer will accept the case only if P is at least .5.

Now, with the same fractional forwarding fee arrangement, suppose that the working lawyer has agreed to charge a contingent hourly-percentage fee with x set at 5%. The condition for accepting the case becomes

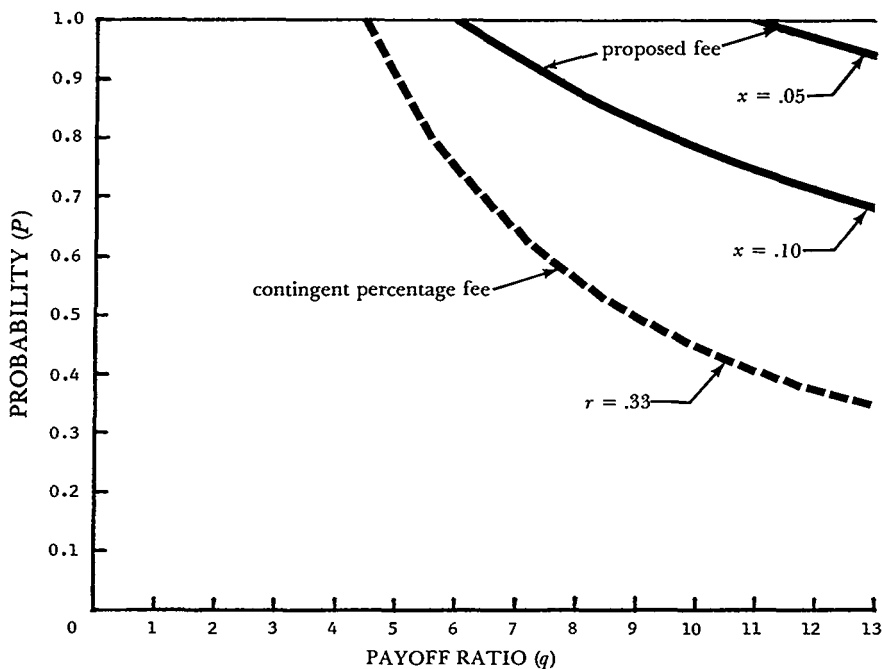
$$\frac{1}{P} \leq \frac{2}{3} (.05q + .95).$$

Hence, for any given value of q , the smallest acceptable value of P is

$$P = \frac{1.5}{.05q + .95}$$

This equation is depicted by the uppermost solid curve in Figure 7. As that curve shows, no case will be acceptable unless it has a very high probability of success and a very high payoff ratio. Even if the working lawyer doubles x to 10%, the number of acceptable cases will still be relatively small.²⁹⁴ As the lower solid curve

FIGURE 7
Effect of Forwarding Fees on Acceptability Boundaries



²⁹⁴ Cf. text accompanying note 178 *supra*.

in Figure 7 shows, a case that the working lawyer estimates to have a 95% probability of success would still require a payoff ratio of at least seven to one.

Thus, under any particular fractional forwarding fee arrangement—that is, for any given value of y —fewer cases will appear acceptable to the working lawyer under the proposed fee than under the contingent percentage fee.²⁹⁵ To offset this effect under the proposed fee, the forwarding lawyer would have to reduce his fee, either by lowering y or by shifting from a fractional forwarding fee to a fee based on work performed. Consequently, we can expect the substitution of the proposed fee for the contingent percentage fee to reduce the prevalence of heavy fractional forwarding fees.

APPENDIX H

COMPUTATION OF THE PARAMETER x

We can express the proposed contingent hourly-percentage fee by the formula $f(h) = xs(h) + (1 - x)wh$, where x represents a percentage.²⁹⁶ The computation of x depends in part on whether x is to be fixed for all cases or left to negotiation in individual cases.

1. Fixed x

For a representative group of lawyers handling contingent percentage cases, let B represent the total time expended by these lawyers on all cases handled during some period under a contingent percentage fee arrangement, including cases where no recovery was obtained; let D represent the total amount recovered in these cases, whether through settlement or judgment; let p represent the fraction of these cases where there was a recovery; let r represent the average percentage rate charged by these lawyers for contingent percentage cases;²⁹⁷ and let w represent the average hourly wage charged by these lawyers for certain hourly cases. The average hourly earnings $w_{\%}$ on contingent percentage cases would then be

²⁹⁵ For the purpose of quantitative comparison, we assume that P and q are independent of the fee arrangement between the lawyer and the client. This assumption introduces some inaccuracy. Under the proposed fee, a lawyer acting in his own economic interests will tend to devote more time to any given case than he would devote under the contingent percentage fee. See text accompanying note 246 *supra*. Hence, a shift from the contingent percentage fee to the proposed fee will probably cause a slight increase in P and a slight decrease in q . However, since the slope of the curves in Figure 7 is from upper left to lower right, these changes in P and q will be mutually offsetting rather than cumulative. A simultaneous increase in P and decrease in q will cause any given case to shift in a direction roughly parallel to the curves. Hence, with respect to the regions depicted in Figure 7, any given case will maintain its relative position as we shift from the contingent percentage fee to the proposed fee. Therefore, the inaccuracy introduced by this assumption is not significant.

²⁹⁶ See text accompanying notes 171-72 *supra*.

²⁹⁷ More precisely, r is the ratio of the total fees charged to the total amount recovered in all those cases handled under a contingent percentage fee arrangement.

$$w_{\%} = \frac{\text{total amount charged under contingent percentage fee arrangement}}{\text{total hours spent on contingent percentage cases}} \\ = \frac{rD}{B}.$$

Now, let us suppose that the proposed fee replaces the contingent percentage fee.²⁹⁸ The average hourly earnings w_n would then be

$$w_n = \frac{\text{total amount charged under proposed fee arrangement}}{\text{total hours spent on proposed fee cases}} \\ = \frac{1}{B} [xD + p(1 - x)wB] \\ = \frac{xD}{B} + p(1 - x)w.^{299}$$

To compute the size of x , we must first choose a goal, because at least two goals are possible: (1) to make lawyers' average hourly earnings under the proposed fee the same as under the contingent percentage fee, or (2) to make their average hourly earnings under the proposed fee the same as under the certain hourly fee.

The first of these goals requires

$$\frac{xD}{B} + p(1 - x)w = w_{\%}.$$

Since $w_{\%} = rD/B$, the above equation becomes

$$x\left(\frac{w_{\%}}{r} - pw\right) = w_{\%} - pw.$$

Now, if we let $k = w_{\%}/w$, then

$$x = \frac{k - p}{\frac{k}{r} - p}$$

²⁹⁸ We make the simplifying assumption that, despite the shift, p will remain unchanged and that, for any given value of B , D will remain unchanged. Actually, a change from the contingent percentage fee to the proposed fee would have some effect on the number of hours worked and the size of the recovery in any particular case, as well as on the mix of cases that lawyers would accept. See text accompanying notes 36, 47, & 189-96 *supra*. These changes would in turn alter somewhat the fraction of cases where there was a recovery and the effectiveness of the hours worked (recovery per hour).

²⁹⁹ The quantity p appears in the formula for w_n because B represents the hours spent on all cases handled under a contingent arrangement, not just on those cases yielding a recovery. Thus, the product of p and B will approximate the number of hours spent on the cases yielding a recovery. This is an approximation because the number of hours spent on the average recovery-yielding case may differ from the number of hours spent on the average case yielding no recovery. If p were defined as the fraction of hours spent on cases yielding a recovery, no approximation would be necessary. We define p as the fraction of cases yielding a recovery because this fraction is more readily obtainable.

The second goal requires

$$\frac{x D}{B} + p(1 - x)w = w.$$

Again, since $w_{q_0} = rD/B$,

$$x\left(\frac{w_{q_0}}{r} - pw\right) = w(1 - p)$$

$$x = \frac{1 - p}{\frac{k}{r} - p}$$

Accordingly, if empirical data for p , r , and k can be obtained, x can be computed.³⁰⁰

2. Negotiable x

Suppose that a lawyer wishes to select a value of x for a particular case. Let P represent the lawyer's estimate of the probability that the plaintiff will recover some amount greater than zero, whether by settlement or judgment; let R represent the conditional expected value of the recovery given that there is a positive recovery; let H represent the total time that the lawyer expects to devote to the case; and let w represent the lawyer's certain hourly wage. Then, the expected value of his hourly earnings under the proposed fee will be

$$E(w_n) = P\left[\frac{xR}{H} + (1 - x)w\right].$$

Hence, by varying x , the lawyer can vary the size of $E(w_n)$. The selected value of x will depend on the lawyer's goal. The lawyer's goal can be generally expressed as $E(w_n) = Kw$, where K can be any positive number.³⁰¹ Then,

$$P\left[\frac{xR}{H} + (1 - x)w\right] = Kw$$

$$x(R - wH) = wH\left(\frac{K}{P} - 1\right)$$

$$x = \frac{\frac{K}{P} - 1}{q - 1},$$

where q is the payoff ratio,³⁰² defined as R/wH . Thus, the value of x will depend

³⁰⁰ See notes 178 & 179 *supra*. Once again we have simplified the analysis by ignoring the non-negativity requirement on the client's net recovery. Cf. notes 37 & 272 *supra*. The effect of accounting for the non-negativity requirement would be a slight increase in the size of x , to compensate lawyers for the larger losses that they will suffer from cases where the opportunity cost exceeds the recovery.

³⁰¹ Thus, $K = 1$ would make the lawyer's expected hourly earnings equal w , his certain hourly wage; $K = w_{q_0}/w$ would make his expected hourly earnings equal w_{q_0} , his average hourly earnings under the contingent percentage fee. K will vary from one lawyer to the next according to such factors as relative bargaining power and attitude toward risk.

³⁰² See text accompanying note 189 *supra*.

on the lawyer's goal, and on his estimate of the probability of recovery and his estimate of the payoff ratio for the individual case.³⁰³

APPENDIX I

EFFECT OF THE PROPOSED FEE ON CASE MIX

Suppose that a lawyer must decide whether or not to accept a given case. To see how his fee arrangement will affect his decision, assume that he will accept the case only if he feels that the total time H that he expects to devote to the case will result in a fee f at least as great as his opportunity cost wH . The condition for accepting the case can then be expressed as $E(f) \geq wH$.³⁰⁴ Let P represent the lawyer's estimate of the probability that the plaintiff will recover some amount greater than zero, whether by settlement or judgment, and let R represent the conditional expected value of the recovery given that there is a positive recovery.

Under the contingent percentage fee, $E(f) = PrR$, and the condition for accepting the case becomes

$$PrR \geq wH.$$

Thus, for given values of P , R , and H , the minimum value of r that the lawyer must charge to make the case economically acceptable is

$$r_{\min} = \frac{wH}{PR},$$

or, equivalently,

$$r_{\min} = \frac{1}{Pq},$$

where q is the payoff ratio,³⁰⁵ defined as R/wH .

Under the proposed fee, $E(f) = P[wH + x(R - wH)]$,³⁰⁶ and the condition becomes

$$P[wH + x(R - wH)] \geq wH.$$

Thus, for given values of P , R , and H , the minimum value of x that will make a case economically acceptable is

$$x_{\min} = \frac{\frac{wH}{P} - wH}{R - wH}$$

³⁰³ Once again we have simplified the analysis by ignoring the non-negativity requirement. Cf. notes 37, 272, & 300 *supra*. The effect of this simplification in the context of negotiated fees depends on the lawyer's estimate of the likelihood of a positive recovery below his opportunity cost. A lawyer would be unlikely to accept a case on a contingent fee basis if he thought there was a substantial likelihood of such a low recovery in the event of victory. Hence, the non-negativity requirement would probably have little or no effect on the negotiated fee in most cases.

³⁰⁴ $E(f)$ represents the expected value of the fee. See note 267 *supra*.

³⁰⁵ See text accompanying note 189 *supra*.

³⁰⁶ See text accompanying note 40 *supra*; note 293 *supra*.

or, equivalently,

$$x_{min} = \frac{\frac{1}{P} - 1}{q - 1}.$$

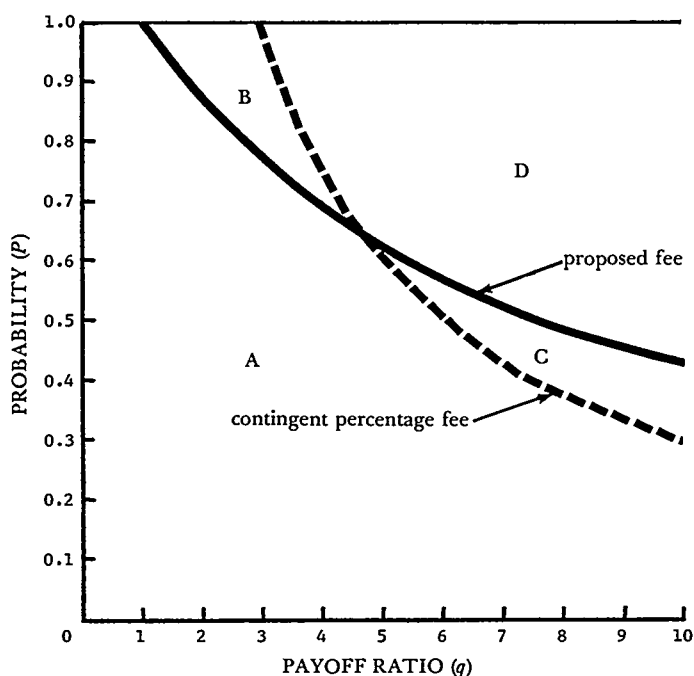
These formulas show that, within limits, cases can be made economically acceptable by raising r or x . Suppose now that, because of restrictions imposed by law or custom, these percentages cannot be raised above certain maximum levels, r_{max} and x_{max} . We can then determine and compare³⁰⁷ the conditions that make cases economically acceptable.

Under the contingent percentage fee, if r cannot exceed r_{max} , a case will be acceptable only if

$$\begin{aligned} Pr_{max}R &\geq wH \\ P &\geq \frac{1}{qr_{max}}. \end{aligned}$$

The broken curve in Figure 6 represents the boundary for this condition when $r_{max} = 33\frac{1}{3}\%$.³⁰⁸

FIGURE 6
Acceptability Boundaries



³⁰⁷ See note 295 *supra*.

³⁰⁸ See notes 194-95 and accompanying text *supra*. For convenience, we reproduce Figure 6 here.

Similarly, under the proposed fee, if x cannot exceed x_{max} , a case will be acceptable only if

$$P[wH + x_{max}(R - wH)] \geq wH$$

$$P \geq \frac{1}{qx_{max} - x_{max} + 1}$$

The solid curve in Figure 6 represents the boundary for this condition when $x_{max} = 15\%$.³⁰⁹

The two curves in Figure 6 cross in such a way that, relative to the contingent percentage fee, the proposed fee encourages the acceptance of small, meritorious cases and discourages the acceptance of large, dubious cases.³¹⁰ It is important to prove that this will always occur, no matter what values are chosen for x_{max} and r_{max} . We will prove this proposition informally by showing (1) that when $P = 1$, the solid curve must lie to the left of the broken curve, and (2) that as P decreases and q increases, the two curves must cross.

The equation for the broken curve is

$$P = \frac{1}{qr_{max}}$$

Hence, for any point on the broken curve,

$$q = \frac{1}{Pr_{max}}$$

Thus, when $P = 1$, $q = 1/r_{max}$. Since $0 < r_{max} < 1$, it follows that $1/r_{max} > 1$, and $q > 1$. The equation for the solid curve is

$$P = \frac{1}{qx_{max} - x_{max} + 1}$$

Hence, for any point on the solid curve,

$$q = \frac{1}{Px_{max}} - \frac{1 - x_{max}}{x_{max}}$$

Thus, when $P = 1$, $q = 1$. Therefore, when $P = 1$, the solid curve will lie to the left of the broken curve.

To find the crossing point, we simply equate the broken curve and solid curve expressions:

$$P = \frac{1}{qr_{max}} = \frac{1}{qx_{max} - x_{max} + 1}$$

The curves will cross when

$$q = \frac{1 - x_{max}}{r_{max} - x_{max}}$$

³⁰⁹ See *id.*

³¹⁰ For definitions of the terms "large," "small," "meritorious," and "dubious," see text accompanying note 189 *supra*.

Since $0 < r_{max} < 1$ and $0 < x_{max} < 1$, we conclude that, as long as $r_{max} > x_{max}$, the curves will cross at a finite value of q greater than one.³¹¹

APPENDIX J

EFFECT OF THE PROPOSED FEE ON SETTLEMENT RATE

In this Appendix we examine the effect of the plaintiff's fee arrangement on the likelihood of settlement. In Appendix E we showed that the conditions under which a given settlement offer will appear minimally acceptable to the plaintiff or to his lawyer depend on the fee arrangement. Those thresholds of minimal acceptability represented the plaintiff's and his lawyer's lower bounds on the range of offers that could result in settlement. We can now apply a similar analysis to the defendant's³¹² economic interests in order to derive an upper bound on the range of offers that he could make. These upper and lower bounds will define a range of possible settlements, and the size of that range will provide a rough measure of the likelihood of settlement.³¹³ It follows that if a shift from the contingent percentage fee to the proposed fee affects the distance between the lower and upper bounds of that range, such a shift will affect the likelihood of settlement, and hence the settlement rate.

³¹¹ In Figure 6, where $r_{max} = 33\frac{1}{3}\%$ and $x_{max} = 15\%$, the curves cross at $q = 4.64$.

³¹² For the purposes of this analysis, we do not distinguish between the economic interests of the defendant and his lawyer. This absence of conflict of interest is quite realistic; in the cases we consider, the defendant's lawyer is almost always paid on a certain hourly basis (see Grady, *supra* note 5, at 23) and will therefore be theoretically indifferent to the size of the settlement offer. Moreover, if any conflict between the defendant and his lawyer does exist, it is very likely independent of the plaintiff's fee arrangement, and can therefore be ignored here. Other conflicts on the defendant's side, such as the conflict between an inadequately insured defendant and his insurance company, are likewise not relevant to the problem being considered here.

³¹³ The relationship between the size of the range and the likelihood of settlement arises from the uncertainty as to the size of the defendant's settlement offer. Let $\phi(s)$ represent the probability density function of the defendant's offer. If we let M represent the maximum offer that the defendant is willing to make, then $\phi(s)$ will be positive on the interval $0 \leq s \leq M$, and zero for all other values of s . If we let m represent the plaintiff's threshold of minimal acceptability, and if $0 < m < M$, then the probability β that the defendant's offer will fall within the range of possible settlement is

$$\beta = \int_m^M \phi(s) ds.$$

If we assume that M does not depend on the plaintiff's fee arrangement, we can determine the relationship between the size of the range and the probability of settlement by taking the derivative of β with respect to m while holding M constant:

$$\begin{aligned} \frac{\partial \beta}{\partial m} &= \frac{\partial}{\partial m} \int_m^M \phi(s) ds \\ &= -\phi(m). \end{aligned}$$

Since $0 < m < M$, it follows that $\partial \beta / \partial m < 0$. Hence, if $0 < m < M$, then increasing the size of the range of possible settlement will increase the likelihood of settlement. Of course, if $m \geq M$, the probability of settlement will be zero.

The cost of a settlement or judgment to the defendant is the sum of two quantities: (1) the amount of the settlement or judgment, and (2) the fee paid by the defendant to his lawyer. At time h a risk-neutral defendant will be willing to settle for a given amount $s(h)$ only if the resulting certain cost to him does not exceed the expected value of the cost that would result from going to judgment.

Let H represent the defendant's estimate of the number of additional hours that his lawyer would have to work if the litigation were to continue through to judgment. Let P_Δ represent the defendant's estimate of the probability that judgment will be rendered for the plaintiff. Let A_Δ represent the defendant's estimate of the size of the judgment that would be awarded if the plaintiff were to win.³¹⁴ Let $f_\Delta(h)$ represent the fee of the defendant's lawyer at time h . Then, the defendant will be willing to settle only if

$$s(h) + f_\Delta(h) \leq P_\Delta A_\Delta + f_\Delta(h + H).^{315}$$

If we assume that the defendant is paying his lawyer a certain hourly fee³¹⁶ at a rate of w , the above expression becomes

$$s(h) + wh \leq P_\Delta A_\Delta + w(h + H).$$

Thus, the maximum offer M_Δ that the defendant is willing to make is

$$M_\Delta = P_\Delta A_\Delta + wH.$$

In Appendix E we calculated for each fee arrangement the plaintiff's threshold of minimal acceptability, m_c , and the threshold of minimal acceptability for the plaintiff's lawyer, m_L . If at time h the defendant makes an offer $s(h)$, and if the plaintiff's best interests control the settlement decision on the plaintiff's side, the offer will be rejected unless $s(h) \geq m_c$. However, the defendant will make the offer only if $s(h) \leq M_\Delta$. Hence, if $M_\Delta \geq m_c$, there will exist a range of offers for which settlement will be possible. Alternatively, if the best interests of the plaintiff's lawyer control, settlement will be possible only if $M_\Delta \geq m_L$. We can now examine how a shift from the contingent percentage fee to the proposed fee would affect the possibility of settlement.

Consider first the case where the settlement decision on the plaintiff's side is made in the best interests of the plaintiff. Under the contingent percentage fee, $m_c = P_\pi A_\pi$.³¹⁷ Therefore, settlement is possible when

³¹⁴ The quantities H , P_Δ , and A_Δ are functions of h since they represent estimates made at time h .

³¹⁵ See Posner, *supra* note 19, at 417-20.

³¹⁶ See Grady, *supra* note 5, at 23. To simplify the analysis, we also assume that w for the defendant's lawyer is the same as for the plaintiff's lawyer under the proposed fee.

³¹⁷ See text accompanying note 270 *supra*. The values P_π and A_π are equivalent to the values P and A in Appendix E. The subscripts merely distinguish these estimates of the plaintiff (or, more properly, of the plaintiff's lawyer) from those of the defendant. To simplify the analysis, we assume that H is the same for the defendant as for the plaintiff. See note 265 *supra*.

$$\begin{aligned} M_{\Delta} &\geq m_C \\ P_{\Delta}A_{\Delta} + wH &\geq P_{\pi}A_{\pi} \\ P_{\pi}A_{\pi} - P_{\Delta}A_{\Delta} &\leq wH. \end{aligned}$$

Under the proposed fee, $m_C = P_{\pi}A_{\pi} - P_{\pi}w(h + H) + wh$.³¹⁸ Hence, settlement is possible when

$$\begin{aligned} M_{\Delta} &\geq m_C \\ P_{\Delta}A_{\Delta} + wH &\geq P_{\pi}A_{\pi} - P_{\pi}w(h + H) + wh \\ P_{\pi}A_{\pi} - P_{\Delta}A_{\Delta} &\leq wH + P_{\pi}w(h + H) - wh. \end{aligned}$$

Thus, under either fee, the possibility of settlement depends on the difference between the plaintiff's and the defendant's estimates of the expected value of the judgment for the plaintiff. More specifically, each fee imposes a limit on how far the estimates of plaintiff and defendant may diverge before settlement becomes impossible. As a rough measure, then, the fee that imposes the higher limit on the size of $P_{\pi}A_{\pi} - P_{\Delta}A_{\Delta}$ carries with it the greater possibility—and hence the greater likelihood—of settlement.³¹⁹ The limit on $P_{\pi}A_{\pi} - P_{\Delta}A_{\Delta}$ is higher under the proposed fee³²⁰ than under the contingent percentage fee when

$$\begin{aligned} wH + P_{\pi}w(h + H) - wh &> wH \\ P_{\pi} &> \frac{h}{h + H} \end{aligned}$$

Generally, then, if the settlement decision on the plaintiff's side is made in the best interests of the plaintiff, a shift from the contingent percentage fee to the proposed fee will encourage settlement when h is small or when P_{π} is large—that is, when the settlement offer comes early in the case, or when the plaintiff's estimate of the probability of victory is large. The points lying inside regions A and C of Figure 8 satisfy this condition.

Consider now the case where the plaintiff's lawyer makes the settlement decision in his own interests rather than in the best interests of his client. Under the contingent percentage fee, $m_L = P_{\pi}A_{\pi} - (wH/r)$.³²¹ Thus, settlement is possible when

$$\begin{aligned} M_{\Delta} &\geq m_L \\ P_{\Delta}A_{\Delta} + wH &\geq P_{\pi}A_{\pi} - \frac{wH}{r} \\ P_{\pi}A_{\pi} - P_{\Delta}A_{\Delta} &\leq (1 + \frac{1}{r})wH. \end{aligned}$$

Under the proposed fee, since $m_L = P_{\pi}A_{\pi} - P_{\pi}w(h + H) + wh - [(\frac{w}{x})(1 - P_{\pi})(h + H)]$,³²² settlement is possible when

³¹⁸ See text accompanying note 271 *supra*. We again ignore the requirement under the proposed fee that the plaintiff never receive a negative net recovery. Cf. note 272 *supra*.

³¹⁹ See note 313 *supra*.

³²⁰ Comparisons of the restrictions on $P_{\pi}A_{\pi} - P_{\Delta}A_{\Delta}$ for the proposed fee and the contingent percentage fee are made at equal values of H . Cf. note 284 *supra*.

³²¹ See text accompanying note 270 *supra*.

³²² See text accompanying note 272 *supra*.

$$M_{\Delta} \geq m_L$$

$$P_{\Delta}A_{\Delta} + wh \geq P_{\pi}A_{\pi} - P_{\pi}w(h + H) + wh - \left[\left(\frac{w}{x}\right)(1 - P_{\pi})(h + H)\right]$$

$$P_{\pi}A_{\pi} - P_{\Delta}A_{\Delta} \leq w(H - h) + P_{\pi}w(h + H) + \left(\frac{w}{x}\right)(1 - P_{\pi})(h + H).$$

This time, the limit on $P_{\pi}A_{\pi} - P_{\Delta}A_{\Delta}$ will be higher under the proposed fee than under the contingent percentage fee when

$$\begin{aligned} w(H - h) + P_{\pi}w(h + H) + \left(\frac{w}{x}\right)(1 - P_{\pi})(h + H) &> (1 + \frac{1}{r})wH \\ P_{\pi}(h + H) - \frac{P_{\pi}}{x}(h + H) &> \frac{H}{r} + h - \frac{1}{x}(h + H) \\ P_{\pi}(1 - x)(h + H) &< h + H - hx - \frac{Hx}{r} \end{aligned}$$

$$P_{\pi} < \frac{h(1 - x) + H(1 - \frac{x}{r})}{(1 - x)(h + H)}$$

$$P_{\pi} < \frac{H(1 - x) + H(x - \frac{x}{r}) + h(1 - x)}{(1 - x)(h + H)}$$

$$P_{\pi} < 1 + \left(\frac{H}{h + H}\right)\left(\frac{x - \frac{x}{r}}{1 - x}\right)$$

$$P_{\pi} < 1 - \left(1 - \frac{h}{h + H}\right)\left(\frac{x}{1 - x}\right)\left(\frac{1 - r}{r}\right).$$

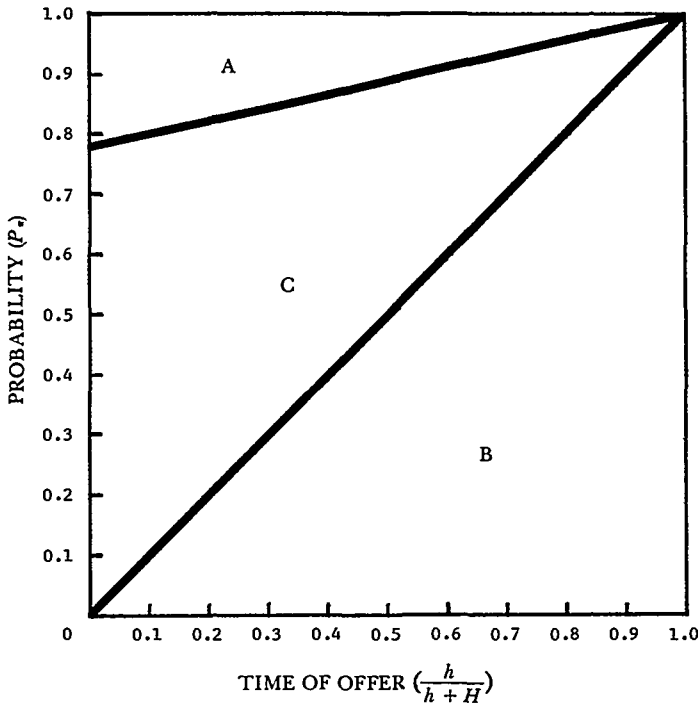
Generally, then, if the settlement decision on the plaintiff's side is made in the best interests of the plaintiff's lawyer, a shift from the contingent percentage fee to the proposed fee will encourage settlement when h is large or when P_{π} is small—that is, when the settlement offer comes late in the case, or when the plaintiff's estimate of the probability of victory is small. The points lying inside regions C and B of Figure 8 satisfy this condition.³²³

In sum, the three regions in Figure 8 depict the effect on settlement rate of replacing the contingent percentage fee with the proposed fee. In region A, settlement is encouraged if the decision is made in the plaintiff's best interests, but discouraged if made in his lawyer's best interests. In region B, settlement is discouraged if the decision is made in the plaintiff's best interests, but encouraged if made in his lawyer's best interests. In region C, settlement is encouraged no matter whose interests govern. To illustrate how this figure works for a typical case, let $P_{\pi} = .9$,³²⁴ and let h vary to simulate the passage of time. If the plaintiff's

³²³ The boundary for this condition—the line separating regions A and C in Figure 8—is computed for $x = .10$ and $r = .33$.

³²⁴ See note 76 *supra*.

FIGURE 8
Effect of the Proposed Fee on Settlement Rate



interests control, the passage of time will cause such a case to go through regions A and C, where settlement will be encouraged, and then to cross into region B, where settlement will be discouraged. Alternatively, if the plaintiff's lawyer's interests control, the case will go through region A, where settlement will be discouraged, and then cross into regions C and B, where settlement will be encouraged. For the typical case, then, a shift from the contingent percentage fee to the proposed fee means that the case will go through one phase where settlement is encouraged and one phase where settlement is discouraged. We can therefore surmise that such a shift in fee arrangements will not have a significant overall effect on the settlement rate.

APPENDIX K

EFFECT OF THE PROPOSED FEE ON THE CLIENT'S NET RECOVERY

This Appendix addresses two questions: (1) whether clients as a group would receive larger net recoveries under the proposed fee than under the contingent percentage fee, and (2) whether a knowledgeable individual client would ever prefer the contingent percentage fee to the proposed fee.

To answer the first question, consider the group of cases now handled under a contingent percentage fee arrangement. Let $s(h)$ represent the s -curve of an average case in this group, and let h_L represent the number of hours now worked on this average case. Next, suppose that the proposed fee, f_n , replaces the contin-

gent percentage fee, $f\%$, and that the number of hours worked becomes h^* . The change in the client's net recovery will depend on the value of x used in computing the proposed fee. Assume that x is chosen so as to make lawyers' average hourly earnings the same under both fees:³²⁵

$$\frac{f_n(h^*)}{h^*} = \frac{f_{\%}(h_L)}{h_L}.$$

In calculating the value of x that would achieve this goal, we made the simplifying assumption that the average recovery per hour would not vary from the contingent percentage fee to the proposed fee.³²⁶ Thus, as an approximation,

$$\frac{s(h^*)}{h^*} = \frac{s(h_L)}{h_L}.$$

Combining the two equations, we have

$$\frac{s(h^*) - f_n(h^*)}{h^*} = \frac{s(h_L) - f_{\%}(h_L)}{h_L}.$$

Since the quantity $[s(h_L) - f_{\%}(h_L)]$ is the average client's net recovery, $C_{\%}$, under the contingent percentage fee, and the quantity $[s(h^*) - f_n(h^*)]$ is the average client's net recovery, C_n , under the proposed fee,

$$C_n = \left(\frac{h^*}{h_L}\right)C_{\%}.$$

If, as is very likely, removal of the incentive for lawyers under the contingent percentage fee to cease working too soon leads to an increase in the number of hours worked on the average case, then $h_L < h^*$.³²⁷ Therefore, $C_n > C_{\%}$. In sum, if x is chosen so as to make lawyers' average hourly earnings the same under both fees, the average client will receive a larger net recovery under the proposed fee than under the contingent percentage fee.³²⁸

Consider now whether a client's net recovery in an individual case handled under the proposed fee³²⁹ can ever be greater if handled under the contingent percentage fee. To answer this question, we return to the assumptions of the original economic model,³³⁰ and further assume that the lawyer decides in his own

³²⁵ In Appendix H we discussed the computation of x based on another possible goal: making lawyers' average hourly earnings the same under the proposed fee as under the certain hourly fee. The goal we have assumed here yields the smaller net recovery for the client.

³²⁶ See note 298 *supra*.

³²⁷ See text accompanying note 246 *supra*.

³²⁸ If we chose x so as to make lawyers' average hourly earnings the same under the proposed fee as under the certain hourly fee (see note 325 *supra*), x would be smaller. See text accompanying notes 299-300 *supra*. Hence, the average client's net recovery would be larger, and the conclusion that $C_n > C_{\%}$ would follow a fortiori.

³²⁹ In the world outside the economic model, some cases rejected by the lawyer under the proposed fee might be accepted under the contingent percentage fee. See text accompanying note 195 *supra*. Cf. note 237 *supra*.

³³⁰ See text accompanying notes 17-21 *supra*.

best interests how much time to devote to the case. Under the contingent percentage fee, the client's net recovery is

$$C_{\%} = s(h_L) - rs(h_L).$$

Under the proposed fee, the client's net recovery is

$$C_n = s(h^*) - [wh^* + x(s(h^*) - wh^*)].$$

Thus, $C_{\%} > C_n$ when

$$(1 - r)s(h_L) > (1 - x)[s(h^*) - wh^*].$$

For a lawyer to accept a case under the contingent percentage fee, however, his fee must equal or exceed his opportunity cost. That is,

$$\begin{aligned} rs(h_L) &\geq wh_L \\ s(h_L) - wh_L &\geq (1 - r)s(h_L). \end{aligned}$$

Therefore, a knowledgeable client will prefer the contingent percentage fee only if the *s-curve* of his case meets the following conditions:

$$s(h_L) - wh_L \geq (1 - r)s(h_L) > (1 - x)[s(h^*) - wh^*].$$

Presumably, only a minority of cases fall within this range.³³¹

³³¹ For a case to fall within this range, the shape of its *s-curve* must be such that it meets three conditions. First, the range must exist: $s(h_L) - wh_L > (1 - x)[s(h^*) - wh^*]$. Second, $C_{\%}$ must be less than or equal to the upper bound of that range: $(1 - r)s(h_L) \leq s(h_L) - wh_L$. Third, $C_{\%}$ must exceed the lower bound of the range: $(1 - r)s(h_L) > (1 - x)[s(h^*) - wh^*]$. To relate these three conditions to the shape of the *s-curve*, let $t = h^* - h_L$, and let $u = [s(h^*) - s(h_L)]/t$. Thus, t represents the time between h_L and h^* , and u represents the average slope of the *s-curve* between h_L and h^* . Since the slope of the *s-curve* decreases from w/r to w on the interval between h_L and h^* (see text accompanying note 246 *supra*), the value of u for any *s-curve* lies somewhere between w and w/r . We can now rewrite the first and third conditions in terms of the new parameters u and t . The first condition becomes $s(h_L) - wh_L > (1 - x)[s(h_L) + ut - wh_L - wt]$. Simplifying, we get $(u - w)t < [x/(1 - x)][s(h_L) - wh_L]$. Similarly, the third condition becomes $(u - w)t < wh_L - [(r - x)/(1 - x)]s(h_L)$. If we let $r = .33$ and $x = .10$, the first condition becomes $(u - w)t < .11[s(h_L) - wh_L]$; the second condition becomes $s(h_L) \geq 3wh_L$; and the third condition becomes $(u - w)t < wh_L - .26s(h_L)$. Thus, the first and third conditions place upper limits on the size of the quantity $(u - w)t$. This quantity represents the amount by which the return $(s(h) - wh)$ increases when h increases from h_L to h^* . The improvement in the return must be small enough to meet both conditions. The first condition means that the return cannot increase by more than 11% between h_L and h^* . Also, the combination of the second and third conditions can be satisfied only if $(u - w)t \leq .07s(h_L)$ and $(u - w)t \leq .23wh_L$; thus, the improvement in the return cannot exceed 7% of the recovery at h_L , nor can it exceed 23% of the opportunity cost at h_L . Moreover, these conditions place upper and lower bounds on the permissible size of the recovery at h_L . To meet the first condition, $s(h_L) > wh_L + 9(u - w)t$. At the same time, the second condition requires $s(h_L) \geq 3wh_L$. To meet the third condition, however, $s(h_L) < 3.9wh_L - 3.9(u - w)t$. The combination of these requirements mandates that at h_L the *s-curve* undergo a sharp decrease in slope and have a narrowly circumscribed height. It seems unlikely that the *s-curves* of most cases will meet all these rather specialized requirements.

We can also determine how much difference (D) there can be between the client's net recoveries under the two fees:

$$D = (1 - r)s(h_L) - (1 - x) [s(h^*) - wh^*].$$

When $D > 0$, the client does better under the contingent percentage fee; when $D < 0$, the client does better under the proposed fee. Let $t = h^* - h_L$, and let $u = [s(h^*) - s(h_L)]/t$. Thus, t represents the number of hours between h_L and h^* , and u represents the average slope of the s -curve between h_L and h^* . After rearranging terms, we have

$$D = (1 - r)s(h_L) - (1 - x) [s(h_L) + ut - wh_L - wt].$$

For any fixed value of h_L , then, we can see how the shape of the s -curve will affect D :

$$\frac{\partial D}{\partial u} = -(1 - x)t,$$

$$\frac{\partial D}{\partial t} = -(1 - x)(u - w),$$

and

$$\frac{\partial D}{\partial s(h_L)} = -(r - x).$$

Since $h^* > h_L$,³³² we know that $t > 0$; and since $x < 1$, we know that $\partial D/\partial u < 0$. Since the slope of the s -curve between h_L and h^* varies from w/r to w ,³³³ and since $0 < r < 1$, we know that u (the average slope of the s -curve between h_L and h^*) must be greater than w ; hence $\partial D/\partial t < 0$. Finally, as long as $r > x$, $\partial D/\partial s(h_L) < 0$. Since all three partial derivatives are negative, the client's net recovery under the contingent percentage fee will exceed his net recovery under the proposed fee by the maximum possible amount when u , t , and $s(h_L)$ become as small as possible. We have seen that u cannot be smaller than w , and that t cannot be smaller than zero. We also know that for the lawyer to accept the case on a contingent percentage basis, $rs(h_L)$ must be greater than or equal to wh_L . Hence, $s(h_L)$ cannot be smaller than wh_L/r . Therefore, we can place an upper bound on D by substituting $u = w$, $t = 0$, and $s(h_L) = wh_L/r$ into the expression for D :

$$D_{max} = \frac{(1 - r)wh_L}{r} - (1 - x) \left[\frac{wh_L}{r} - wh_L \right].$$

For $r = .33$ and $x = .10$, $D_{max} = 0.2wh_L$. Thus, although in some cases the client may find the contingent percentage fee advantageous, in no case can that advantage exceed $0.2wh_L$. By contrast, in the more common cases where the contingent percentage fee will be disadvantageous to the client, there is no limit to the size of the disadvantage: Although the size of u cannot exceed w/r , the sizes of t and $s(h_L)$ have no bound.

In sum, most clients will individually receive a larger net recovery under the

³³² See text accompanying note 246 *supra*.

³³³ See note 21 and text accompanying note 246 *supra*.

proposed fee than under the contingent percentage fee. For these clients the relative advantage of the proposed fee can be very large. Although in a minority of cases falling within a certain range clients will do better under the contingent percentage fee, the relative advantage cannot exceed $0.2wh_L$. Moreover, it would be unrealistic to assume that any client can predict the shape of the *s-curve* with sufficient accuracy to know whether his case falls within this range.

